RELIGION AND CHANGE IN A MEXICAN VILLAGE

By

David L. Clawson

A DISSERTATION PRESENTED TO THE GRADUATE COUNCIL
OF THE UNIVERSITY OF FLORIDA
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1976

© Copyright 1977

by

David L. Clawson

ACKNOWLEDGMENTS

I am grateful for having had the opportunity, over the past four years, of studying under a master teacher and geographer, Dr. Raymond E. Crist. Dr. Crist has served as committee chairman, and has rendered guidance, encouragement, and support throughout our association.

I also wish to thank the other members of my committee. Dr. William E. Carter has offered numerous valuable suggestions from the inception of the research proposal through the final draft of the dissertation. Dr. Clark I. Cross and Dr. Louis A. Paganini have both served as mentors, friends, and counselors.

I appreciate those individuals and institutions who provided the financial support which made this study possible. These include Dr. Shannon McCune and Dr. Cross as chairmen of the Department of Geography, Dr. A. Garr Cranney, Director of the Reading and Study Skills Center, and Dr. Earl C. Pirkle, chairman of the Department of Physical Sciences. I am particularly grateful to the Office of Education of the United States Department of Health, Education, and Welfare, for financial support for the field research through a Fulbright-Hays Doctoral Dissertation Research Abroad fellowship, grant number OEG-0-74-3849.

The field work could never have been successfully completed without the full cooperation of various officials of the Mexican government, of the citizens of San Buenaventura Nealtican, and of all others who contributed in countless ways to the gathering of the field data.

Lastly, I thank my wife and children for providing meaning and purpose in my life.

TABLE OF CONTENTS

Chapter		Page
	Acknowledgments	iii
	List of Tables	xi
	List of Figures	xiii
	Abstract.	xv
One	Introduction	1
	Rationale for the Study	1
	The Need to Increase World Agricultural Output	1
	The Role of Peasants in Increased Agricultural Production	2
	The Mexican Peasantry	4
	The Changing Religious Composition of Mexico and Latin America	5
	Research Objectives of the Study	6
	Methodology	7
	Organization of the Study	8
	Notes	10
Two	Peasants and the Diffusion of Innovation	11
	The Nature of Geography	11
	Diffusion as a Scholarly Topic	12
	Sociology	12
	Anthropology	14
	Economics	19

Chapter Page

Geography 20

Diffusion as Employed in the Study 21

Peasants and Diffusion Theory 22

Social and Religious Diffusion 22

Technical and Agricultural Diffusion . . . 26

Notes 31

Three Timeliness of the Study: The Diffusion of Protestantism in Mexico and Latin America 35

History of the Catholic Church in Latin America. 35

Current Status of Catholicism in Latin America . 37

Growth of Protestantism in Latin America 41

Current Status of Protestantism in Latin America 43

Protestant Growth in Mexico 44

Current Status and Strength of Protestantism in Mexico 45

Summary 46

Notes 47

Four The Setting 49

The Physical Milieu 49

Location 49

Geology 50

The Soil 53

Climate 55

Water Resources 57

Vegetation 60

TABLE OF CONTENTS, continued

Chapter Page

The Cultural Milieu 62

Agrarian Atmosphere 62

A Typical Day 63

Occupational Stratification 67

Life Inside and Outside the Compound . . . 68

Health and Sanitation 72

Notes 73

Five Nealtican: The Land 74

Conditions Prior to 1910 74

The Founding 74

Land Use 78

Post-1910 Conditions 82

The Revolution 82

Land Redistribution 83

Current Conditions 85

Land Tenure Patterns 85

Size of Land Holdings 87

Inheritance Customs—Two Examples 88

Scattered Distribution of Lands 89

The Agricultural Cycle 92

The Winter Preparation Season 93

Planting of Corn and Squash 97

Multicolored Corn 98

Planting of Beans 100

TABLE OF CONTENTS, continued

Chapter Page

The Summer Cultivation 102

The Harvest 105

Crops and Their Uses 109

Animals 114

Plows 114

Land and Wealth 115

Subsisting on One Hectare 115

Seasonal Unemployment 119

Conclusions 122

Notes 123

Six The Conversion Process—The Diffusion of Religion at the Individual Level 124

Social Determinants of Conversion 124

Occupation 124

Economic Incentive 124

Lineage 127

Location of Residence 128

Political Affiliation 131

Age 132

Trauma as a Factor Preceding Conversion 134

The Proselyting Process 136

Who Are the Converts? 139

Rosaliano Hernández—Pentecostal 139

Marcelino Osorio Castillo—Splinter-Mormon. 140

Rosendo Tlatelpa—Latter-day Saint 142

TABLE OF CONTENTS, continued

Chapter Page

Postconversion Adjustments 143

Notes 145

Seven The Religious History of Nealtican: A Study of the Diffusion of Religion at the Village or Corporate Level 146

The Catholic Era 146

The Period of Protestant Preparation 152

The Period of Protestant Establishment 155

The Period of Internal Protestant Dissension . . 157

The Period of Rapid Protestant Expansion 160

Conclusions 163

Notes 165

Eight Current Religious Conditions 167

Structure and Organization 167

Catholic 167

Latter-day Saint 172

Separatist Latter-day Saint 176

Church of God in the Mexican Republic (Evangelical) 178

Degree of Activity 180

Roman Catholic 180

Latter-day Saint 183

Separatist Latter-day Saint 185

The Church of God in the Mexican Republic (Evangelical) 185

Refutation of the Theory of Conversion for Economic Gain 186

TABLE OF CONTENTS, continued

Chapter Page

Summary 189

Notes 192

Nine The Diffusion of Agricultural Technology 193

Technology Capable of Increasing *Municipio* Agricultural Output 193

Water Availability 193

Credit Availability 195

Fruit Tree Productivity 196

Rodent Control 196

Animal Protein Supply 197

Vegetable Production 198

Corn and Bean Production 198

Availability of Secondary Sources of Employment 199

False Needs 201

Mechanization 201

Hybrid Seed 202

Chemical Fertilizer 203

Improved Transportation Network 204

Factors Regulating the Diffusion of Agricultural Technology 204

Level of Wealth 204

Attitude Toward Outsiders 206

Ability to Cooperate 209

Ability to Follow and Implement Instructions 211

TABLE OF CONTENTS, continued

Chapter Page

Applicability of the So-Called "Innovations" 211

Notes 216

Ten Religious Affiliation and Agricultural Technology . . 217

The Impact of Protestantism on Factors Regulating the Diffusion of Agricultural Technology 217

Ability to Cooperate 217

Ability to Follow and Implement Instructions 220

Attitude Toward Outsiders 222

Level of Wealth 230

Religious Affiliation and Agricultural Innovation 234

Eleven Recommendations and Conclusions 236

Recommendations 236

Conclusions 238

Notes 242

Appendix

I Ratio of Catholic Priests to Members by Country . . . 243

II Growth of Protestantism in Latin America 1916-1961. . 244

III Percent Protestant by Country 245

IV Questions Asked of All Respondents 246

V Questions Asked of Protestant Respondents 249

Bibliography 250

Biographical Sketch 257

LIST OF TABLES

Table		Page
1	Chronology of the Establishment of Selected Protestant Sects in Mexico, Chile, Argentina, and Brazil	42
2	Monthly and Annual Mean Temperatures and Precipitation of Puebla, Puebla	58
3	Proportion of Land Operated by Tenurial Systems According to Religion	86
4	Seasonality and Value of Required Labor for One-Half Hectare of Corn, Nealtican, Puebla, 1974-1975	94
5	Seasonality and Value of Required Labor for One-Half Hectare of Beans, Nealtican, Puebla, 1974-1975	95
6	Average Corn and Bean Production, Nealtican, Mexico . .	116
7	Average Annual Consumption of Family of 4 Adults . . .	116
8	Average Annual Farm Budget, Nealtican, Mexico	117
9	1974-1975 Farm Commodity Prices, Nealtican, Mexico . .	118
10	Seasonal Unemployment, Nealtican, Mexico	120
11	Surname Occurrence by Religious Affiliation	129
12	Growth of Protestantism and the Demise of Isolation in Nealtican, 1930-1970	164
13	Estimated Catholic Participation in Selected Sacraments and Religious Rites	182
14	Average Weekly Attendance at L.D.S. First Ward Services, March, 1975	182
15	Average Lifetime Religious Expenditures Over a 40-Year Period for a Nealtican Man with Five Children	188

LIST OF TABLES, continued

Table Page

16 Comparative Activity of Catholics and Protestants in Nealtican 190

17 Chi-squared Analysis of Innovative Agricultural Behavior 207

18 Chi-squared Analysis of Participation in Agricultural Innovations 221

19 Chi-squared Analysis of Exposure to Outside Influences: Literacy, Reading, Radio, Television, and Technical Aid from Church 223

20 Chi-squared Analysis of Outside Influence: Trips Outside Nealtican 226

21 Chi-squared Analysis of Wealth 231

22 Chi-squared Analysis of Regular Diet 233

LIST OF FIGURES

Figure Page

1 Municipio of Nealtican. 51

2 Nealtican and Surrounding Region 52

3 Nealtican Water Supply During the Dry Season 61

4 Nealtican Post Office and Telephone Outlet 64

5 Family Compound 69

6 Map Depicting the Founding of Nealtican 75

7 Pre-1910 Ranchos and Haciendas in the Nealtican Region 80

8 Genealogy of Wealth 90

9 Genealogy of Poverty 91

10 Colors of Corn 101

11 Four Types of Plows 101

12 Meal Break During an Ayuda 106

13 Beating Beans with Sticks 106

14 Winnowing Beans 108

15 Harvesting Corn 108

16 Color and Size of Beans 111

17 Village of Nealtican 130

18 Concentric or Encirclement Settlement Pattern of the Dominicans 149

19 Occupation Settlement Pattern of the Franciscans . . . 149

20 Catholic Church in Nealtican 151

LIST OF FIGURES, continued

Figure Page

21 Benito Juárez School of 1955 162

22 Latter-day Saint Chapel in Nealtican 162

23 Catholic Church Organization in Nealtican 169

24 Latter-day Saint Church Organization in Nealtican . . . 173

25 Splinter Latter-day Saint Church Organization in Nealtican 177

26 Church of God in the Mexican Republic Church Organization in Nealtican 179

Abstract of Dissertation Presented to the Graduate Council
of the University of Florida in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Religion and Change in a Mexican Village

By

David L. Clawson

June, 1976

Chairman: Raymond E. Crist
Major Department: Geography

The rapid increase and rising expectations of the world's population require that world food production be increased. Yet the diffusion among the world's peasantry of recently developed advanced strains and associated technology has been limited. Because peasants still comprise half the world's farmers, one of the most practical means of augmenting world agricultural output is to increase the productive capacity of the peasantry.

Latin America, including Mexico, is experiencing rapid Protestant growth which, if continued, is destined to produce significant alterations in a culture which was established around the core of Catholicism. This study, carried out from September, 1974 to May, 1975, was designed to determine to what extent, if any, religious diffusion is related to technological diffusion among Latin American peasants; whether Protestant peasants, already having broken with one strong tradition and having a strong religious bond to North Americans, are more receptive to new agricultural ideas as well.

The peasant village of San Buenaventura Nealtican has had native resident Protestants for almost 50 years. The physical and cultural

milieu of the village is described, as is the historical development of land tenure and agriculture.

The diffusion of religion at the individual level is analyzed. Age and trauma are the primary social determinants of conversion; the youth and the dissatisfied are attracted to Protestantism. There is no correlation between conversion to Protestantism and the following: occupation, economic incentive, lineage, location of residence, and political affiliation. Postconversion adjustments include dropping all godfather ties but retaining donship.

There is a close historical correlation between the establishment and expansion of non-Catholic religions and the breakdown of traditional physical and psychological barriers. Religious innovation within peasant societies appears to be proportionate, all else being equal, to the extent of cultural diversity within the community, which is regulated by the degree of exposure to nontraditional influences.

Both formal and folk Catholicism have been declining in Nealtican for over forty years. In contrast, Protestant activity is high and the village is, at present, greatly influenced in many of its facets by the Protestant worldview. This is attributable to the organizational framework of Protestantism which provides a prestigious ecclesiastical leadership position to every active member, and to the large investment Protestants have in their churches in terms of time and money. The belief that native peoples convert to new religions in order to improve their economic position is refuted. Protestantism is considerably more expensive and demanding in terms of time and conformation to behavioral restrictions than is Catholicism. It is easier, cheaper, and more

common to remain a nonparticipating Catholic than to convert to Protestantism.

Peasant society is not found to be inherently noninnovative. Technological innovation is restricted by a lack of sufficient financial security, by a distrust of outsiders and their products, and by an inability to follow and implement instructions. Protestants are wealthier, have a higher literacy rate and greater leadership training, and are less distrustful of outside ideology than Catholics. Consequently, Protestants are more receptive than Catholics to agricultural innovation, but only when the so-called "innovation" is perceived as truly beneficial.

The indigenous Protestant minorities of numerous rural Latin American communities constitute a largely untapped source of potential increased agricultural productivity. Planners of Latin American development should be aware of these factors and establish strategies accordingly.

CHAPTER ONE

INTRODUCTION

Rationale for the Study

The Need to Increase World Agricultural Output

Considerable attention has been focused in recent years upon the rapid increase in world population, now estimated at 4,000,000,000, and the resultant strain placed on the world's food supply. As the population continues to grow at an estimated annual rate of 75,000,000, demographers, statesmen, and others whose work involves them closely with this phenomenon, remain divided among themselves over how best to cope with the situation. One point that is universally accepted, however, regardless of the political orientation, race, religion, or economic level of the nation or individual, is the necessity to increase the world's food production.[1]

An outgrowth of this consensus has been the initiation of a worldwide campaign to increase agricultural productivity. The effort, spearheaded by American foundations and governmental agencies, has included massive funding of research designed to develop new, higher-yielding strains of the world's basic food crops. A much publicized product of the effort is the so-called Green Revolution which, commencing in the 1950's, has resulted in the development of high-yielding hybrid strains of wheat and rice and, by the mid-1970's, in the breeding of a strain of high-protein corn, called Opaque-2, whose protein content, equivalent to that of meat and milk, provides hope for improving the nutrition of over 300 million peasant corn farmers.[2] Another, less frequently mentioned but nevertheless significant, result of the Green Revolution has been the association, in the minds of many peasants living in the underdeveloped countries, of modern agricultural products and techniques with the United States of America, and as an unfortunate consequence, with so-called "American imperialism."

In spite of the unquestionable advantages in yield or nutrition that result from the recently developed advanced strains and associated agricultural technology, their diffusion among the world's peasantry has been limited. It is important to ask why the Green Revolution has met such strong resistance in precisely those underdeveloped areas whose need for increased agricultural production is greatest. It is apparent that plant breeders and others assigned to develop the "miracle" crops have succeeded; however, extensionists and those charged with the responsibility of taking the technological developments to the farmers, and helping establish cultivation of the new strains, have frequently failed. It is further evident that a principal cause of the failure of the extensionists continues to be peasant distrust of outsiders, a distrust caused in part by the association of improved products and techniques with American intervention.

The Role of Peasants in Increased Agricultural Production

The intended beneficiaries of the Green Revolution are the peasants residing in the world's underdeveloped countries. In spite of the rapid urbanization of the 20th century, peasants still comprise over 50 percent of the world's population, and a vast majority of the world's farmers.[3] Consequently, one of the most practical means of augmenting world agricultural output is to increase the productive capacity of the peasantry.

A peasant is a semisubsistence agriculturalist who lives in the rural countryside while maintaining an economic, political, and moral symbiosis with a nearby market community and the state.[4] The essential distinguishing quality of the peasant is his relationship with the adjacent market town or city. With the cash he receives from the sale of his agricultural surplus, the peasant then purchases those goods and services which he considers necessary and which he cannot provide for himself. These frequently include medical care, articles of clothing, manufactured agricultural implements, schooling for his children, home furnishings and appliances, and certain foods and drinks.

The peasant and the urban dweller are consequently mutually dependent upon one another. The urbanite relies, either partially or completely upon the peasant for his food needs. The peasant, in turn, depends heavily upon the urban dweller for numerous goods and services. This relationship generally results in the peasant's utilizing money, but not living in a money economy, which can be defined as an economy which uses money to create more money.[5] It is this unique economic position which distinguishes the peasant from the purely subsistence farmer, who has no regular economic dealings with the urban world, and from the commercial farmer, whose primary purpose is to produce for commercial transactions rather than for himself.

In addition to the rural-urban market relationship, a considerable body of literature exists concerning additional peasant characteristics. The findings of these studies vary widely. While acknowledging his poverty and primitive technology, Redfield saw in the peasant character the embodiment of all that is good, moral, and noble.[6] Most other scholars have found quite the opposite to be true, noting that peasant society is characterized by economic and emotional insecurity, suspicion and distrust of others, fatalism, and a lack of cooperation.[7]

Both Redfield and his critics agree that the peasant generally lives in great poverty. Owing to a lack of wealth, most peasants cannot afford to sustain what economically advanced nations consider even a minimal level of living. The peasant is frequently undernourished as well as malnourished. His scant cash income cannot be stretched to provide adequate medical and dental care. His housing and sanitation facilities are generally substandard. It is difficult to afford proper clothing for himself or his wife and children. His poverty and isolation greatly restrict educational opportunities for him and for his family.

The Mexican Peasantry

Mexico, in spite of increasing industrial and urban growth, continues to possess a large rural peasantry. In 1970, out of a total population of 48,225,238, 12,909,540, or 26.8 percent were classified as economically active. Of the latter figure, 5,103,519, or 40 percent were employed in primary economic activities, the great majority of which were campesinos, or peasants.[8]

It is evident that it is to the advantage of both the world in general, and of nations such as Mexico, whose populations contain large numbers of peasants, to increase peasant agricultural yields. Any increases in peasant output contribute significantly to the alleviation of food shortages. In addition, the individual nations and the entire world benefit through greater capital production, higher living levels, heightened feelings of personal contentment and achievement, and in many cases, but not all, increased domestic and international tranquillity.

The Changing Religious Composition of Mexico and Latin America

Since 1900, radical shifts have occurred in the religious composition of Mexico and Latin America, as increasing numbers of Catholics are converted to Protestant, spiritualist, and similar non-Catholic groups. While these changes have gone largely unnoticed, they are destined, if present trends continue, to produce significant alterations in a culture which was established around the core of Catholicism. Scholars estimate that from 1940 to 1960 the number of Protestants and similar non-Catholics in Mexico rose from 330,000 to over 1,000,000. At present, Protestants comprise approximately 4 percent of Mexico's population, and Damboriena estimated that by 1980, one of every six Mexicans will be Protestant.[9]

To what extent is religious diffusion associated with technological diffusion among Latin American peasants? Are Protestant peasants, already having broken with one strong tradition, more receptive to other new ideas as well? Furthermore, could it be possible that Catholic peasants in Mexico who leave the mother church are more receptive, owing to their religious affiliation, to agricultural and related technological innovations than their neighbors who remain Catholic? Willems has observed that it is "predominantly North American Protestantism, represented by American missionaries, that found its way into Latin American culture."[10] Is it possible that the religious bond between Latin American Protestants and their spiritual brothers and sisters in the United States is sufficient to reduce the latent peasant distrust of outsiders, their skills and products, and to ameliorate the currently voguish xenophobia manifested by most underdeveloped countries toward the industrialized world, and the United States in particular? This study was conceived as an attempt to answer the questions posed above. If it were indeed true that Protestant and similar non-Catholic peasants are more willing, for whatever the reasons, to experiment with technological and agricultural innovations, it would be evident that these non-Catholic farmers constitute a group which affords unusual opportunities to Mexico, and to other countries in similar circumstances, to increase national agricultural production.

Research Objectives of the Study

Diffusionists are frequently guilty of classifying carriers and accepters of one type of innovation, such as technological or agricultural, as automatically being carriers of sociological and other types of innovation. The study was predicated upon the presumption that different kinds of innovation exist and that an individual or group that accepts one type will not necessarily accept a second type. It was hypothesized in the study that (1) peasants are prime adoptors and innovators of religious diffusion owing to their position at the bottom of the social and power scale and to their inability to achieve the goals of their society, and (2) that peasants are poor acceptors and carriers of economic innovation because they cannot afford to risk even a single crop loss.

The study had three major research objectives. The first was to complete, in a Mexican peasant agricultural village which contained large numbers of both Catholics and non-Catholics, an analysis of the diffusion of non-Catholic religions among the peasants. Three subobjectives were established:

A. To determine which social and economic conditions, both at a corporate and at an individual level, most frequently precede conversion to Protestant and similar non-Catholic groups.

B. To determine which societal subgroups are most attracted to Protestant and similar non-Catholic groups.

C. To determine how the conversion to Protestantism is effected.

The second research objective was to determine how agricultural technology is diffused among a peasant population. A necessary prerequisite of such a study is a knowledge of the agricultural practices of the peasantry.

The third research objective was to effect a comparative analysis of the two diffusion processes, religious and agricultural, to determine to what extent, if any, religious innovation is associated with technological innovation among the peasants of the study area.

Methodology

Field data were collected during a period of residency at the project area in 1974-1975. A large portion of the material contained in the study, including all of the comparative agricultural and statistical data, was obtained by means of questionnaires (Appendices IV and V) completed by the author during voluntary interviews with both Catholic and non-Catholic peasant heads-of-households, who were selected from local census records by stratified random sampling. The information obtained from these interviews was then tabulated and grouped according to religion, either Catholic or non-Catholic, and statistical comparisons were effected by means of the Chi-squared Test.

Organization of the Study

Chapter Two, "Peasants and the Diffusion of Innovation," establishes diffusion as a geographical topic and contains a review of diffusion studies pertaining specifically to peasants. This is followed by a chapter which describes and analyzes the religious history of Mexico and Latin America, and current trends in the growth of non-Catholic religions in this traditionally Catholic culture sphere.

Chapter Four takes the reader to the study area, describing the physical and cultural milieu of the village of Nealtican. Next, an analysis is provided in Chapter Five of land tenure and agriculture as they evolved in Nealtican in the past, as they are at present, and what their future prospects might be.

The diffusion of religion at the individual level is analyzed in Chapter Six. Particular attention is given to the social determinants of conversion, to the proselyting process, and to postconversion adjustments.

This is followed by an analysis, in Chapter Seven, of the diffusion of religion at the village, or corporate level. The role of organized religions in Nealtican, both past and present, is described with particular emphasis on those societal and economic conditions that preceded, accompanied, and followed the establishment of Protestantism in the village, and especially on the close historical correlation between the establishment of non-Catholic religions and the breakdown of traditional physical and psychological barriers in the village.

Chapter Eight consists of a description of current religious conditions in Nealtican. The organization, structure, and current level of activity of each religious group are presented with emphasis placed on the role of the individual within his religious unit.

Chapter Nine contains an analysis of the diffusion of agricultural technology in the village. The seven aspects of village agriculture which are most in need of attention, and which offer the greatest potential for increased productivity in the _municipio_, are described. The factors which influence, both positively and negatively, the diffusion of these needed agricultural practices are examined.

In Chapter Ten, the impact of organized religion on the factors, discussed in Chapter Nine, which control the diffusion of agricultural technology is assessed. A statistical analysis, utilizing the Chi-squared Test, is presented, demonstrating the extent of correlation between religious affiliation and the adoption of modern agricultural and technological practices among the villagers. It is followed by a final chapter containing the conclusions of the study and recommendations for future research.

Notes

[1] United Nations, Statistical Yearbook 1972, p. 10; Ganzin, p. 4. The urgency of increasing the world's future food production is accentuated by the following United Nations predictions of world and Latin American population growth, taken from the 1972 Statistical Yearbook, p. 10:

Year	World Population	Latin American Population
1975	4,021,758,000	326,833,000
1980	4,456,688,000	377,172,000
1985	4,933,463,000	434,640,000
1990	5,438,169,000	499,771,000
1995	5,961,389,000	572,477,000
2000	6,493,642,000	652,337,000

[2] Friggens, pp. 10-11.

[3] Foster, Traditional Societies and Technological Change, pp. 25, 33.

[4] For scholarly descriptions of peasants, the reader is referred to the following: Wolf, pp. 456-466; Wagley and Harris, pp. 428-449; Foster, Traditional Societies and Technological Change, pp. 30-31; Redfield, The Primitive World and Its Transformations, p. 31; Kroeber, p. 284.

[5] Mead, p. 239.

[6] Redfield, The Primitive World and Its Transformations, pp. 31-53.

[7] Foster, Traditional Societies and Technological Change, pp. 29-40; Arensberg and Niehoff, pp. 139-142; Erasmus, p. 265.

[8] United Nations, Demographic Yearbook 1972, pp. 246, 304-305.

[9] Damboriena, Vol. I, pp. 38-41; Bridges, p. 93.

[10] Willems, p. 5. It is interesting to note the opinion of Banfield, as expressed in his analysis of peasant backwardness in southern Italy, p. 162: "The change in outlook that is needed might conceivably come as the by-product of Protestant missionary activity." Whetten, p. 158, commented on the superior "farming techniques and practices" of non-Catholics in northern Mexico.

CHAPTER TWO

PEASANTS AND THE DIFFUSION OF INNOVATION

The Nature of Geography

Wellington Jones, in 1934, defined geography as "the study of 'human occupance to regions,'" and went on to add:

> . . . no other recognized discipline is so particularly concerned as is geography with the intimate association of peoples with the areas they occupy.[1]

Jones' definition is representative of a major field of geography which emphasizes land-man relationships. This tradition evolved from the meaning of the original Greek word geographia, which meant "description of the earth."[2] Earth description is admittedly too broad and general a phrase, and requires further delimiting. Among those who have attempted to do so is Carl O. Sauer, who wrote that the study of an area should be differentiated by three principal factors: the physical quality of the area, the character of the people who occupy the land, and the time period during which the human activities have been at work.[3]

A second important tradition which has developed within geography is the analysis of spatial distributions as they exist over all or a part of the earth's surface.[4] A logical spinoff of this tradition is the study of the location and movement of objects through space. Increasingly, geographers are endeavoring to determine optimum location for hospitals, schools, and businesses, and numerous geographical studies have been made on aspects of migration.[5] Migration, however, is but a part of the larger phenomenon of diffusion which, in its broadest spatial sense, encompasses the movement, or transfer, through space of all objects and concepts.

Diffusion as a Scholarly Topic

Diffusion can be studied either as a psychological or as a spatial process. In the former, emphasis is placed on those qualities which help make an individual either a good or poor innovator, carrier, or adopter of diffusion. Spatial studies of diffusion stress movement through space, be it a tangible, physical object or something intangible such as an idea or concept.

Owing to the varied possibilities of approaching and analyzing the subject, numerous scholarly traditions, principally those of the social sciences, rightly include diffusion within the scope of their fields of study. The claims occasionally heard from scholars of the various disciplines to the effect that it is solely their subject matter which approaches diffusion correctly simply lend credence to Rogers' lament of the "lack of diffusion on diffusion research."[6] In reality, no single research tradition has a monopoly on the subject, and the various disciplines merely differ from each other in the emphasis or stress placed on one or more aspects of diffusion. This section contains a summary of the nature of diffusion studies within four disciplines: sociology, anthropology, economics, and geography.

Sociology

Sociologists tend, by virtue of the nature of their discipline, to stress the psychological processes of diffusion within a given society. Rogers wrote of four crucial elements in the analysis of the diffusion of innovations: the innovator, the communication of the innovation from one individual to another, the social system within which the innovation is communicated, and the time continuum.[7]

Another example of the sociological approach to the study of diffusion comes from Katz and Levin, who wrote

> Viewed sociologically, the process of diffusion may be characterized as the (1) acceptance, (2) over time, (3) of some specific item--an idea or practice, (4) by individuals, groups, or other adopting units, linked (5) to specific channels of communication, (6) to a social structure, and (7) to a given system of values, or culture.[8]

Yet another, similar, sociological description of diffusion comes from Havens, who wrote

> Diffusion of innovation is generally considered as a decision-making process whereby the individual passes through a series of stages (awareness, information seeking, evaluation, trial, adoption) that lead to adoption of an innovation.

Havens further noted that, in sociological studies, "Generally the individual is considered as the unit of analysis, although groups, communities, or even societies could be utilized."[9]

Owing to the emphasis placed on diffusion between individuals, sociological diffusion studies tend to stress one or more elements of the adoption sequence, and also the impact of various conditions on the adoption process. Fliegel and Kivlin, for example, studied how the characteristics of an innovation influence its diffusion rate, finding the attributes of an innovation to constitute a "basic factor in explaining differences in the rates at which various innovations are adopted."[10] They concluded that innovations involving the least risk are the most readily accepted. Houtart and Pin have stressed the importance of the individual's value system as an element influencing his willingness to innovate, and noted, "Without a change of values in the Latin American peasant, one will never change the agricultural system, and thereby profoundly influence his productivity."[11] Coughenour, another sociologist, found educational level and amount of contact to be the two most important factors determining the acceptance rate of innovations. He further found, when studying twelve Kentucky localities at identical three 5-year intervals, and measuring the acceptance of single innovations, that the communities varied among themselves in their rate of acceptance but were consistent in their own acceptance rates over the years. He concluded that each community has its own character or quality which influences its rate of acceptance.[12]

Havens studied the number of choices available to potential adopters of innovation, and determined that the actor usually perceives a finite, rather than infinite, number of choices. He concluded that in Latin America, owing to the very small amount of power exercised, the average individual is unlikely to make any significant management decisions.[13]

In summary, sociologists place very little emphasis on the diffusion of innovations between two or more societies or cultures, preferring instead to study the mental processes through which individuals within a given society or culture pass as they proceed toward the adoption of an innovation, and the factors or elements which influence those decisions.[14]

Anthropology

In contrast to sociologists, who prefer to study diffusion within a given society or culture, anthropologists consider diffusion to be, by its very nature, an intercultural phenomenon. Kroeber, for example, wrote

> Diffusion may be viewed as an extension of the process, on a much larger scale, by which an invention or innovation--or sometimes even an older culture trait--spreads from the society in which it originated to new societies and becomes established in their cultures.[15]

Méndez listed four major components of diffusion: first, the intensity of outside stimulation and its distribution through time; second, the distribution of receptive individuals in the social network, which depends on individual proclivity to change and the compatibility of the innovation to the receptor culture; third, the time lapse required for the adopter to transmit information and otherwise exert innovative influences on other individuals; and fourth, the pattern of interpersonal contacts through which information and other pressures for change travel.[16] Herskovits noted

> Diffusion can be thought of as that aspect of cultural change which includes the transmission of techniques, attitudes, concepts and points of view from one people to another. . . .[17]

Finally, Linton observed that "this transfer of culture elements from one society to another is known as diffusion."[18]

A large body of terms and definitions of diffusion-related processes has also arisen in anthropology. Special effort has been made by many to differentiate between diffusion and acculturation, the latter being generally defined as ". . . those changes produced in a culture by the influence of another culture which result in an increased similarity of the two."[19] Using the above definitions, diffusion, in anthropological terms, can be described as the process of transfer or movement through space of a culture trait, and acculturation as the resultant changes in the recipient culture after exposure to diffusion over time. A third related term is assimilation which is distinguished from acculturation by the fact that the latter consists of the individual changes produced by diffusion while the former is the process in which a synthesis of the acculturated traits is achieved with the native culture.[20] It quickly becomes apparent that fine hair-splitting is involved in distinguishing the three terms, and Herskovits has appropriately warned against placing too great a stress in trying to differentiate between them, noting that all three represent "phases of a single process," a statement to which Kroeber agreed.[21]

Acculturation and assimilation were described above in an attempt to demonstrate that, by their own criteria, anthropologists have little interest in the significance of spatial factors on diffusion. Emphasis, instead, is placed on those factors which influence, either positively or negatively, the acceptance of traits and their assimilation into the entire fabric of the native culture.

Perhaps the dominant factor, in the mind of the anthropologist, in determining whether a trait will be accepted or not, is its compatibility with the potential recipient culture. It is universally agreed that the better the new trait fits into the pattern of the existing culture, the greater its chances of acceptance.[22] When considering technological innovations, anthropologists rightly stress the importance of innovation compatibility, citing various instances in which an improved seed or technique, such as hyyrid corn, was rejected by the local people in spite of potential improvements in yield or nutrition, owing to its incompatibility with local customs.[23] Numerous other documented cases exist which demonstrate that medical, religious, and other innovations also succeed to the extent that they are compatible with native customs and practices.[24]

Anthropologists have also studied societal organization and relationships as factors influencing acculturation. The Crumrines found the social structure of culture contact to be the primary determinant of diffusion patterns. They hypothesized that all contact situations can be classified as favoring either societal integration or individual integration. In the former, culture brokers, or the individuals in contact representing statuses of fixed membership groups, screen the potential innovations. Some are rejected, some modified, and others accepted in their entirety. Those which are not rejected are then accepted in their revised form by the represented subordinate group as a unit. In cases of individual integration, the group as a unit will not evolve, but the traditional culture will gradually disappear, or will be maintained in a dual fashion by bicultural individuals who act traditionally within the native social context and nontraditionally when without the native sphere. Those individuals who do not adopt the innovation tend to become even more conservative than they were before.[25] Foster has stated that if innovations require new forms of social relationships, strong resistance will be met, while resistance will be considerably less if new forms are not required.[26] Other findings related to societal organization and relationships include Arensberg and Niehoff's conclusions that the young are more apt to experiment than the old, and Goodenough's finding that unstratified societies tend to have a broader base of common sentiments than do socially complicated ones.[27] Consequently, unstratified societies tend to react more uniformly to a potential innovation, either accepting, modifying, or rejecting the innovation, according to its perceived value to the group.

Anthropological attention has been given to the nature of man as it affects his disposition to create and accept innovations. Barnett wrote that every individual is basically innovative, a conclusion also reached by Arensberg and Niehoff.[28] Barnett also found a positive correlation between individualism and innovative potential.[29] Niehoff and Anderson found that peasant negativism is not a tenable explanation for the rejection of an innovation.[30]

Many studies have been made of the role which the nature of the potential innovation plays in its adoption. Studies by Arensberg and Niehoff, Siegel, and Barnett all agree that material and technological innovations are more likely to be adopted than those of social organization or supernatural belief, presumably because the authors felt that the latter were less compatible than the former with native cultures.[31] It can be argued, however, that statements such as these are simplifications which preclude consideration of local conditions.

Another factor which influences the acculturation of new traits is the relationship between the donor and the recipient cultures. George Foster, in particular, has contributed much to understanding this relationship as it existed in colonial Latin America. In his model of the "conquest culture," Foster hypothesized that two complete cultures never come in full contact with each other. This is attributable to numerous factors including the fact that the militarily dominant donor culture screens, both consciously and unconsciously, those traits which will be passed on to the recipient culture, that the recipient culture rejects certain incompatible aspects of the screened donor culture, and that mutations occur as the new hybrid culture develops. Time gradually results in what Foster terms "cultural crystallization," a process in which the new integrated culture develops its own separate identity.[32] Studies by Barnett, Siegel, Linton, and Arensberg and Niehoff all support Foster's thesis.[33]

Additional acculturation and assimilation studies whose findings are widely accepted include Coe and Barnhill's conclusion that insiders make better carriers of innovation than outsiders, and Press' finding that mental ambiguity in the potential recipient of innovation reduces the likelihood of adoption. Studies by Goodenough indicated that once an innovation is adopted, it must continue to be compatible with the innovator, or else it will be abandoned, and Hogbin found that fear of punishment, as well as the promise of a reward, can induce acceptance of innovation.[34]

Economics

Economists, in contrast to sociologists and anthropologists, have a direct interest in the impact of technological innovations on economic growth and development. They concern themselves very little, however, with the effect of those innovations on the native culture, or with the diffusion of traits unrelated to technology, except as those traits influence economic development. Fried theorized that when two cultures of great economic disparity come into contact, there exist three broad alternative changes that may occur: total destruction of the native culture, transformation of the native culture, or incorporation of the native culture.[35]

Griliches wrote that the rate of acceptance of an innovation is a function of profitability. He further stated:

> The process of adapting and distributing a particular invention to different markets and the rate at which is is accepted by entrepreneurs are amenable to economic analysis.[36]

Millikan and Hapgood presented an economic viewpoint when suggesting thirteen desirable characteristics of a package of innovations: (1) profitability, (2) complementarity, or including practices which complement the innovation(s), (3) appeal, (4) compatibility with the local culture, (5) simplicity, (6) availability, (7) immediate applicability, (8) inexpensiveness, (9) low risks (10) expandability to a larger scale of operation, (11) spectacular impact, (12) communicability, and (13) residual effect--the farmers should achieve self-reliance.[37]

Geography

The distinguishing quality of the geographical approach to diffusion is its stress on the impact of spatial relationships on the diffusion process. An illustration can be drawn from Coughenour's previously cited sociological study of diffusion in twelve Kentucky communities. Coughenour concluded that each community had its own character or quality which influenced its acceptance of innovations. A geographer, faced with similar findings, would likely take the study one step further and ask how the location, relative isolation, and similar spatial features contributed through time to the formation of the character of each community, which in turn influenced innovation acceptance rates.

The contributions of geography to diffusion theory are therefore principally spatial in nature. Cohen described three models which can be applied to diffusion studies. The first is the "hierarchical effect."

> If one defines a base for a hierarchy, be it size, social status or any other criterion, the higher the ranking of a potential adoption unit in that hierarchy, the greater the chance for adoption before units that are lower on the hierarchy.[38]

The second predictive model is the Logistic Curve, in which the coordinates time and accumulative number of adopters approach the upper limit as time increases. The third model, called the "neighborhood effect," states that, all else being equal, the greater the spatial proximity, the greater the likelihood of innovation adoption.[39]

This last model, the neighborhood effect, is not new, and has been presented by scholars many times previously. Preston James stated the same concept thusly:

> It is probable that innovation will be transmitted most rapidly from a source region to those parts of a receiving region which are in closest geographical proximity.

He then adds this important clarification:

> Geographic proximity is not solely a matter of distance; proximity is better measured in terms of the flow of communications, and the frequency of contacts.[40]

Anthony F. C. Wallace has formulated an "Age-Area Diffusion Model," which is similar to Cohen's neighborhood effect, but adds the dimension of time. The model holds that the longer a trait is established in a given locale, the stronger it will become. The spread of the trait proceeds away from the point of origin in all directions. Thus the closer an area is to the point of origin, the greater the strength of the trait in that area is likely to be. This results in a pattern of concentric circles centered around the point of origin, with the trait weaker in each succeeding circle.[41]

Numerous scholars, principally geographers and anthropologists, have tested the neighborhood effect concept and found it accurate. These include Sauer, Kniffen and Stanislawski, who studied the diffusion of agriculture, folk housing and the grid-pattern town respectively, and the anthropologists Foster, Goodenough, Redfield, Linton, Kroeber and Herskovits.[42]

Diffusion as Employed in the Study

This study employs diffusion in both its psychological and spatial contexts. The psychological aspect is most valuable in analyzing both the diffusion of religion and the diffusion of agricultural technology at the individual and corporate levels. In this sense, the study concentrates primarily on the psychological dimensions of diffusion. On the other hand, it is also a study in spatial diffusion; an analysis of the movement of both religion and agricultural technology from a technologically and economically advanced nation to a technologically and economically less-advanced nation, and from one location to another within the recipient nation. No attempt is made to restrict the study to the viewpoint of a single discipline. It is instead hoped that through taking a balanced approach to the subject, a more thorough analysis will be achieved.

Peasants and Diffusion Theory

As was noted in the introductory chapter, social scientists have frequently been guilty of issuing sweeping generalizations concerning diffusion and the adoption of innovation that ignore important differences in the nature of the material being diffused. This is particularly true with regard to peasant receptivity of innovation. Such statements as "peasants are poor innovators" or "peasants are receptive to innovation" are so broad as to be rendered valueless. This section contains an analysis of significant theoretical studies pertaining to peasant receptivity to the two types of diffusion of concern to the study, social or religious diffusion, and agricultural or technological diffusion.

Social and Religious Diffusion

Religious affiliation and economic status

The first great study of the possible correlation between religious affiliation and economic status was Max Weber's The Protestant Ethic and the Spirit of Capitalism. Weber found that, in countries of mixed Catholic-Protestant religious composition, the

> business leaders and owners of capital, as well as the higher grades of skilled labour, and even more the higher technically and commercially trained personnel of modern enterprises, are overhwelmingly Protestant.[43]

Since the publication of Weber's work, the concept of a correlation existing between religious affiliation and economic status has been much maligned by those who erroneously consider the hypothesis to be religiously prejudiced. Nevertheless, the concept has persisted and there exists a large body of recent studies, principally by sociologists, which substantiate Weber's conclusions. These findings were not based on the particular researcher's personal religious affiliation, if any, but rather owe their existence to the easily recognizable fact that

> the religious divisions between Catholicism and Protestantism [and Judaism or any other religion, we might add] are quite deeply rooted in . . . cultural factors, which in turn are strengthened by the accent placed by these groups on one or another aspect of the Christian message.[44]

Jackson, Fox, and Crockett found that

> (1) Protestants are more likely than Catholics of the same occupational origin to enter high-status nonmanual occupations; (2) Catholics are more likely than Protestants of the same origin to enter low-status nonmanual occupations; (3) Protestants are more often sharply up-mobile, and Catholics are more often sharply down-mobile.[45]

These conclusions are substantiated by Mayer and Sharp, who tested a sample population of Detroit, Michigan, and found that Protestants ranked above Catholics in economic prosperity; that even the various Protestant denominations could also be ranked in order of worldly success. They concluded that

> religious preferences appear to have meaningful consequences for economic success, quite apart from other background factors associated with religion. It would seem, therefore, that religion continues to play an essential role in controlling, limiting, and guiding economic behavior.[46]

The findings of Mayer and Sharp were similar to those of Veroff, Feld, and Gurin, who attributed the situation to the adult male Catholic's association of achievement with "a low income and a large family," in contrast to Protestant men who associated achievement with high income rather than family size.[47]

Studies conducted in Brazil and Chile, areas where considerable Protestant growth has occurred among peasants or former peasants in the last three decades, found Protestants to have statistically significant ($p = .001$) higher housing conditions than Catholics. Protestants were also found to be more progressive farmers, occupationally upmobile over several generations, and in general, wealthier than their Catholic counterparts.[48]

Peasants, marginality and religious innovation

For many years, scholars were divided between two conflicting viewpoints concerning the possible interrelationship between peasants and religious innovation. One group claimed that peasants are the most likely segment of society to accept religious innovation, owing to the fact that little or nothing could be lost by changing. The second group maintained that, owing to their traditional conservativeness, peasants are poor adopters of religious innovation.

In 1965, William E. Carter published an article which attempted to reconcile the two, seemingly conflicting, views. Carter hypothesized that religious innovation is dependent upon the level of socio-cultural complexity of the community. In closed, homogeneous societies, Carter suggested that the peasant is the least innovative because marginal groups are rarely present, while in pluralistic societies, the peasant is the most innovative because marginal groups are common, and Protestantism offers the peasant a form of social protest.[49] The belief that peasant religious innovation is a manifestation of social protest was also espoused by Willems and Lewis.[50]

It should be noted that in peasant villages, where peasants comprise both the marginal and nonmarginal sectors of society, the Carter hypothesis can be tested only if the village is analyzed as a unit within the framework of the larger regional society of which it is a part. The hypothesis cannot be tested within the limited context of a single peasant village.

Protestantism and social change

In 1967 Emilio Willems published a landmark analysis of Protestantism in South America entitled Followers of the New Faith. After studying Protestants in Brazil and Chile, Willems concluded that Protestantism was closely associated with social change, and strongest in those areas which had changed most. Protestant growth was found to be most closely associated with three aspects of social change: migration, industrialization, and urbanization.[51] In addition to finding that social change stimulates Protestant growth, Willems also concluded that Protestantism causes sociocultural change, inducing the believer to redefine social relationships both with other converts and with Catholics, family structures, the socialization of children, occupational and educational aspirations, and political behavior.[52]

Conversion for economic gain

A common belief among most students of culture change is that native peoples convert to new religions in order to improve their economic position. Hogbin noted: "It is commonplace that missionaries and religious revivalists always make most headway among the downtrodden."[53] The conversion may be motivated by a desire to abandon costly traditional religious observances, or by a desire to participate in a newly offered economic reward, or by a combination of both. Foster has claimed that the two most frequent and important motivations for change are desire for economic gain and desire for greater prestige and status.[54]

Technical and Agricultural Diffusion

There currently exists among students of culture change and peasant economic development a basic schism concerning peasant willingness to adopt technological innovations. One group holds that, for various reasons, peasants are poor economic innovators. The second group asserts the opposite to be true. The debate has far-reaching repercussions among planners of third-world development strategies, for if peasant society is indeed intrinsically noninnovative, then economic development can be achieved only through massive, large-scale outside intervention and aid. If, however, there is nothing inherent in peasant society that inhibits economic innovation, development can theoretically be achieved through small infusions of aid allocated on a self-help basis. This section presents studies from both sides of the controversy.

Peasants are poor innovators

Foremost among studies indicating peasants are poor innovators are George Foster's model entitled the "Image of Limited Good," and Charles Erasmus' cognition model.

Foster's model, derived in part from a study of Tzintzuntzan, a peasant village in Michoacán, Mexico, theorizes that, in the mind of the peasant, all things desirable in life exist in finite, not infinite quantities.

> By 'Image of Limited Good' I mean that broad areas of peasant behavior are patterned in such fashion as to suggest that peasants view their social, economic and natural universes—their total environment—as one in which all the desired things of life such as land, wealth, health, friendship and love, manliness and honor, respect and status, power and influence, security and safety, exist in finite quantity and are always in short supply, as far as the peasant is concerned. Not only do these and all other 'good things' exist in finite and limited quantities, but in addition there is no way directly within peasant power to increase the available quantities.[55] (Underline by Foster.)

As a consequence,

> in peasant societies and among other underprivileged peoples, innovative people tend to be seen as rapacious and greedy. Because they are upsetting the traditional distribution of 'good,' of the limited resources of the group, they are viewed as threats to community stability rather than as entrepreneurial models to be emulated.[56]

In addition to discouraging economic innovation, Foster claims that the image also inhibits development of local leadership and permits the display of wealth only in a ritual context.[57]

While insisting that the image accurately describes all peasant societies, Foster did not claim that all peasants are dominated by it. Once a few innovative peasants cross the threshold of modernity, an increasing number of followers do likewise, and ". . . in time the limited-good premise will lose most or all of its inhibiting power."[58] This does not alter the fact, however, that the image, according to Foster, reduces the likelihood of such an occurrence to the extent that peasant society is rendered inherently noninnovative.

Charles Erasmus' cognition model also supports the hypothesis that peasant society is, by nature, intrinsically noninnovative. The model follows the theoretical development of society from a closed to an open stage of development. The principal stimulus for development is held to be prestige motivation, and the principal means of achievement, the cognitive faculty of man.[59] When peasant society is at the initial closed stage of development, man's knowledge, or cognition, of his environment is limited, and consequently, his ability to control the environment and his own destiny are also restricted. Owing to the limited availability of goods, the accumulation of wealth is socially unacceptable. Innovation and individual achievement are strongly discouraged. In order to enforce this standard, peasants exercise "invidious sanction," permitting wealth to be displayed only through the process of "conspicuous giving," such as religious rituals, which process acts as a leveling mechanism, reducing differences between the wealthy and the poor.[60]

The change away from the closed stage is initiated through improved exchange and the resultant greater variety and availability of goods. This induces occupational specialization which in turn increases man's cognitive capacity and his ability to control the passive physical and cultural environments. With increased wealth, conspicuous giving is replaced by conspicuous ownership as the principal means of prestige achievement, and invidious sanction succumbs to invidious emulation as the public display of goods becomes an important concern to the members of society.[61] In this transitional stage, the inherently noninnovative character of peasant society is altered as individuals compete for the accumulation of wealth. It is evident that when this point of the theoretical development is reached, society has been transformed to the extent where it is no longer peasant in nature, occupational specialization having significantly altered in many the unique peasant-urban market relationship.

The transitional stage is ultimately transformed into an open developmental stage in which conspicuous production, in its many forms, is the predominant means of prestige achievement.

The theoretical significance of Erasmus' model lies in the emphasis placed on cognition, which can be obtained and developed only through direct, observed experiences. The more frequent the observations, the greater the likelihood of peasant change.[62] Change and innovation are thus directly linked to the extent of outside intervention, since without such intervention, the peasant is unable to achieve the degree of cognition necessary for change to occur.

Numerous other scholars have found peasants to be inherently non-innovative. Lewis concluded from his study of Tepoztlán that it is

> not a competitive society. Accordingly, a lack of strong drive and ambition for self-improvement and a lack of initiative and originality are notable.[63]

Hogbin found that "the concept of progress is in primitive societies unknown."[64] Ingham concluded that in rural Mexican folk culture, life is a zero-sum game in which wealth and other good things are in such limited supply that expansion in one area inevitably results in a reduction in another area.[65] Vásquez' study of Vicos found that the rewards of the social and economic system were so limited that " . . . many Vicosinos developed fatalistic self-images of themselves as men unable to possess material objects. . . ."[66] Finally Lasswell concluded, "The Vicos story verifies the comparative hopelessness of structural change in villages that must depend exclusively on their own initiative."[67]

Peasants are good innovators

The hypothesis that peasants are, by nature, intrinsically innovative received support from James Acheson, who in 1972, published the results of his study of a Tarascan village.[68] Acheson found that blocks to development were primarily economic in nature, rather than cultural or cognitive. Such factors as a lack of needed skills and ready capital constitute, in Acheson's opinion, the true obstacles to development. Acheson concluded

> The presence of superior economic opportunities is the single most important factor involved in developmental change. Conversely, lack of positive economic change can be primarily traced to the absence of these opportunities.[69]

Other studies have also supported the hypothesis that peasants are good potential innovators. Huizer, in disputing Foster's and Erasmus' explanations of Latin American peasant conservatism, placed the blame for the absence of peasant initiative on an outwardly imposed "culture of repression," and stated that once the repression is removed, peasants become militant and ready to accept change.[70] Crist and Nissly found physical and economic barriers to constitute the principal blocks to peasant innovation, citing such factors as roads, markets, land, titles, level of living, size of land holdings and the availability of technical advice and credit.[71] Arensberg and Niehoff also found peasant poverty to be a major impediment to acceptance of innovation.[72]

The implication of findings that peasants are potentially ready innovators is that development can be achieved by working within present conditions by providing the peasants with opportunities to innovate. These opportunities do not necessarily have to come from massive outside intervention, but rather can be generated through small-scale self-help programs.

Notes

[1] Jones, p. 94.

[2] Webster's Seventh New Collegiate Dictionary, pp. 346, 349, 364.

[3] Sauer, "The Survey Method in Geography and Its Objectives," p. 23.

[4] Abler, Adams, and Gould, pp. 70-76; Broek, pp. 5, 30-33, 78.

[5] An example of such a locational study is Pierre de Vise, Misused and Misplaced Hospitals and Doctors: A Locational Analysis of the Urban Health Care Crisis.

[6] Rogers, p. 21.

[7] Ibid., p. 12

[8] Katz and Levin, p. 240.

[9] Havens, p. 96.

[10] Fliegel and Kivlin, pp. 247-248.

[11] Houtart and Pin, p. 68.

[12] Coughenour, p. 325.

[13] Havens, p. 98.

[14] An exception to the prevalent sociological disinterest in intercultural diffusion is Hurh, pp. 263-285.

[15] Kroeber, p. 411.

[16] Méndez D., p. 242.

[17] Herskovits, p. 14.

[18] Linton, p. 324.

[19] Kroeber, p. 425.

[20] Herskovits, p. 15.

[21] Ibid., p. 14; Kroeber, p. 425.

[22] Arensberg and Niehoff, p. 84; Mead, p. 13. Mead used the term "cultural relativity" when referring to cultural compatability.

[23] Foster, Traditional Societies and Technological Change, p. 89; Hogbin, p. 80; Apodaca, pp. 35-39.

[24] Lewis, "Seventh Day Adventism in a Mexican Village: A Study in Motivation and Culture Change," pp. 63-64; Lewis, "Medicine and Politics in a Mexican Village," p. 433.

[25] Crumrine and Crumrine, pp. 50-51.

[26] Foster, Traditional Societies and Technological Change, p. 106.

[27] Arensberg and Niehoff, pp. 109-110; Goodenough, pp. 88, 91.

[28] Barnett, Innovation: The Basis of Culture Change, p. 18; Arensberg and Niehoff, p. 2.

[29] Barnett, Innovation: The Basis of Culture Change, p. 65.

[30] Niehoff and Anderson, p. 282.

[31] Arensberg and Niehoff, p. 62; Siegel, p. 204; Barnett, "Diffusion Rates," p. 356.

[32] Foster, Culture and Conquest: America's Spanish Heritage, pp. 7-13, 227.

[33] Barnett, Innovation: The Basis of Culture Change, p. 49; Siegel, p. 173; Linton, p. 336; Arensberg and Niehoff, p. 63.

[34] Coe and Barnhill, p. 149; Press, p. 207; Goodenough, p. 225; Hogbin, p. 96.

[35] Fried, p. 394.

[36] Griliches, p. 501.

[37] Millikan and Hapgood, pp. 79-80.

[38] Cohen, p. 14.

[39] *Ibid.*, pp. 14-15.

[40] James, p. 49.

[41] Wallace, p. 141.

[42] Sauer, Agricultural Origins and Dispersals, pp. 549-577; Kniffen, pp. 549-577; Stanislawski, pp. 105-120; Foster, Traditional Societies and Technological Change, p. 150; Goodenough, p. 88; Redfield, The Primitive World and Its Transformations, pp. 72-73; Linton, pp. 328-329, Kroeber, p. 411; Herskovits, p. 13.

[43] Weber, p. 35.

[44] Houtart and Pin, p. 137.

[45] Jackson, Fox, and Crockett, pp. 48, 63.

[46] Mayer and Sharp, p. 227.

[47] Veroff, Feld, and Gurin, pp. 205, 216.

[48] Willems, pp. 180, 186, 206.

[49] Carter, pp. 383-392.

[50] Willems, p. 131; Lewis, "Seventh Day Adventism in a Mexican Village: A Study in Motivation and Culture Change," p. 81.

[51] Willems, pp. 71, 86.

[52] *Ibid.*, pp. 14, 189-197, 231-232.

[53] Hogbin, p. 63.

[54] Foster, *Traditional Societies and Technological Change*, p. 153.

[55] Foster, "Peasant Society and the Image of Limited Good," p. 296. For Foster's complete discussion of the Image of Limited Good, see *Tzintzuntzán*, pp. 122-152.

[56] Foster, *Applied Anthropology*, p. 83.

[57] Foster, *Traditional Societies and Technological Change*, pp. 36-38.

[58] *Ibid.*, p. 39; Foster, *Applied Anthropology*, pp. 83-84.

[59] Erasmus, pp. 10-11, 14.

[60] *Ibid.*, pp. 113-120.

[61] *Ibid.*, p. 157.

[62] *Ibid.*, p. 22.

[63] Lewis, *Life in a Mexican Village: Tepoztlán Restudied*, p. 300.

[64] Hogbin, p. 78.

[65] Ingham, p. 78.

[66] Vásquez, p. 71.

[67] Lasswell, p. 173.

[68] Acheson, pp. 1152-1169.

[69] *Ibid.*, pp. 1161.

[70] Huizer, p. 303.

[71] Crist and Nissly, pp. 161-163.

[72] Arensberg and Niehoff, p. 140.

CHAPTER THREE

TIMELINESS OF THE STUDY: THE DIFFUSION OF PROTESTANTISM IN MEXICO AND LATIN AMERICA

The diffusion through Latin America of people and agricultural and industrial technology is much studied, but an equally significant change, that of a people's values and beliefs, has received little attention. This chapter is devoted to an analysis of the growth in Latin America of Protestantism, a prominent component of culture change as experienced by the region.

History of the Catholic Church in Latin America

Indicative of the influence of ages past is the definition of Catholicism found in the Nuevo Pequeño Larousse Ilustrado Spanish dictionary. Roman Catholicism, says the dictionary, "is the religion of the hispanic-American peoples."[1] At the turn of the 20th century, and even more so at the end of the Spanish colonial era, such a blanket statement would have been quite correct.

The unique relationship of church and state in the Iberian conquest of the New World soon resulted in the nominal conversion of almost the entire population of the Spanish and Portuguese realms.[2] The conversion effort was greatly aided by a doctrine of missionary tolerance which permitted any practice not expressly forbidden by the Bible.[3] The resultant fusion of Iberian Catholicism with native American cults fostered the development of a wide variety of syncretistic practices and beliefs which became an integral element of the local cultures. During the colonial era, Catholicism became the basis of the Latin American ethos, the denial of which was considered tantamount to betrayal of one's own fatherland and family. Yet an unforeseen danger to the church, owing perhaps to its tolerance, was that for many, allegiance to Catholicism came to be more a generalized culture trait than adherence to a specific set of practices and beliefs.[4]

The constant threat of introduction of unacceptable philosophies by liberal dissidents and foreigners necessitated the establishment of the Inquisition, which was charged with the responsibility of regulating the flow of ideas entering and leaving Spanish America. This combination of social tradition and governmental enforcement produced a region which, for centuries, was almost universally Catholic.

Catholic dominance continued unabated through the colonial era which was ended when wars of liberation swept the Spanish realm in the early 19th century. All of the newborn nations, with the exception of Argentina, retained Catholicism as the state religion. Owing to the association of the church with the ruling elite, however, opposition in most of the countries to Catholicism as an official creed shortly arose. Those who favored its continuance as a state religion were called conservatives, and those who opposed its retention were known as liberals. The principal point of contention was not spiritual belief in Catholicism, which most liberals acknowledged, but rather anticlericalism manifested by opposition to the church's overwhelming control of free expression, education, vital statistics, marriage, and economic wealth.[5]

The cleavage spawned a never-ending conflict which has continued down to the present day in almost every Latin American nation.

Institutional adaptations to the conflict have evolved in each nation according to local traditions and the relative strength of the two factions. At present, Latin America can be divided religiously into two general groupings: those countries which retain a union of church and state, and those which do not. Mecham lists the following under the former: Argentina, Bolivia, Colombia, Costa Rica, Dominican Republic, El Salvador, Haiti, Paraguay, Peru, and Venezuela. Those countries which have a constitutional separation of church and state are Brazil, Mexico, Chile, Cuba, Ecuador, Guatemala, Honduras, Nicaragua, Panama, and Uruguay.[6]

Current Status of Catholicism in Latin America

It is generally recognized that two kinds of Catholicism were transported from Europe to the American continents. Northern European Catholicism, which emanated from Ireland and the Germanic countries, was established in Anglo-America. It has historically emphasized attendance at Mass and the worship of Jesus Christ. In these two respects, it differs considerably from the tolerant, southern European, Mediterranean-based Catholicism which was carried to Latin America by the Spanish and Portuguese.

Owing, perhaps, to the idolatrous background of the native peoples, the Hispanic Catholicism which evolved in Latin America soon came to revolve

> around the cult of the Saints, the nature of which often clashes with official Catholic doctrine . . . the Saints are promoted to de facto dieties . . . while "God" becomes a rather abstract entity without any functions.[7]

This has led to considerable north-Atlantic criticism of Hispanic Catholicism as a form of idolatry. A second historically distinguishing characteristic of Hispanic Catholicism has been a general apathy by the populace toward attendance at Mass.[8]

This being the case, one might ask whether the two religious systems are part of the same religion or whether, in reality, they do not constitute two separate religions. European and Anglo-American scholars have frequently vacillated between these two positions. Coleman, for example, in an effort to be positive about the subject, wrote: "It is the glory of his [sic] Church that Catholics are literally one, no matter how great their variety or their diversity."[9] In the same publication, however, he divided Latin American Catholicism into four subtypes: formal, nominal, cultural, and folk.[10] A formal Latin American Catholic is one who "seriously accepts the doctrine and discipline of the Church as given through . . . the bishops and priests." A nominal Catholic is "baptized, believing, but not practicing." Cultural Catholicism "implies the social organization of the Church as a way of life." Finally, folk Catholicism "emanates from the people and finds its expression in indigenous practices and customs, only distantly related to the Church's formal aspect."

It appears, then, that according to the Coleman classification, two distinct religions operate in Latin America under the Catholic name. The first is formal Catholicism which, in essence, is a part of European and Anglo-American Catholicism. It is characterized by obedience to the teachings of the Pope and other church officials regarding attendance at Mass and participation in the saving sacraments. Nominal Catholics are inactive formal Catholics; they acknowledge belief in the teachings of the church hierarchy but do not comply.

The second "Catholic" religion operative in Latin America is folk Catholicism. Members of this religious system do not actively seek after, nor readily accept, official Catholic dogma with respect to church attendance, principles of faith, or reception of the sacraments. Formal Catholics consider this religion to be "a curious mixture of religious sentiments and practices that bear no relation to the real substance."[11]

Available evidence indicates that formal Catholicism is a minority religion in Latin America. In Brazil, for instance, where in 1963, 94 percent of the population declared itself to be Catholic, the average attendance at Mass on Sunday was 10 percent.[12] Read and Ineson estimated that in 1965, only 50 percent of the eligible Brazilians took their first communion, and only 35 percent of the burials were Catholic.[13] The same authors estimated that in 1973, 30 percent of the Brazilians classified as Catholic practiced spiritism, and further noted that, based on the generally accepted estimate of a 10 percent formal Catholic participation rate, the size of the Protestant community in Brazil, which now numbers approximately 11,000,000, "closely approaches that of the Catholics."[14] Writing on Chile in 1941, Father Alberto Hurtado, S. J. stated that only 10 percent of the Chilean population were practicing Catholics.[15] Houtart and Pin estimated weekly attendance at Mass in Peru and Venezuela at between 3 and 5 percent in rural areas, and 10 to 20 percent in the cities.[16] Willems concurred with Houtart and Pin's low estimate of rural activity, noting that the peasantry has the largest percentage of "non-practicing Catholics" among Latin American social groups and classes. He went on to add:

> One may safely conclude that, as a rule, the peasantry is largely controlled by religion, but very little by the Roman Catholic Church.[17]

A conference of Latin American bishops held in June, 1958, concluded that Sunday observance on the continent amounted to only 3.5 percent of the men and 9.5 percent of the women.[18] Referring to Latin America as a whole, Mecham estimated the number of practicing Catholics to be between 15 and 30 percent of the population. He added that while over 90 percent of the population are baptized Catholics claimed by the church, more than two-thirds never take their first communion.[19] At Chimbote, Peru, in 1953, an Inter-American Catholic Action Group of 300 lay men and women delegates tried to answer the question, "Is Latin America Catholic?" The consensus of the conference was that the vast majority of Catholics are such, solo de nombre (only in name). "We have proved that the high percentage of Catholics in the population of Latin America represents only a nominal Catholicism."[20]

At present, the Catholic Church is conducting a two-pronged attack aimed at increasing activity. The first emphasis is to stress Catholic interest in social reform, something which the church, perhaps in the long run to its own detriment, has usually opposed in the past. The second effort is an attempt to increase greatly the number of Catholic clergy in Latin America in order to convert the population to formal Catholicism (see Appendix I for priest-member ratio by country). Many Catholic leaders feel that if the number of priests can be expanded, Catholic allegiance can be significantly increased. Others argue that the shortage of clergy is an effect rather than one of the causes of the widespread Catholic inactivity. Regardless, the shortage is so serious that Father John Considine estimated that an additional minimum of 4,000 priests is needed.[21] The magnitude of the task of "reconversion" is enormous and not all Catholic leaders agree that it can be achieved.

Father Roger Vekemans, for example, has said that the Catholic Church is not "losing" Latin America because in reality it never "had" it.[22]

Growth of Protestantism in Latin America

It is the near universal dominance of either nominal or folk Catholicism, and the resultant lack of influence of formal Catholicism, that has conditioned and accompanied the rapid growth of Protestantism in 20th-century Latin America. Prior to 1916, Protestantism in Latin America was content mainly to establish a firm base for future expansion. Many of the older sects, such as the Anglican, Lutheran, Presbyterian and Methodist, were introduced either by European businessmen or by colonists into South America in the first half of the 19th century following the wars of independence (Table 1). They were soon joined by other long-established sects, including the Baptist, Congregational, and Episcopalian, and by many newer, North American-based groups including the Seventh Day Adventist, and Church of the Nazarene (Table 1). At the turn of the century, church membership was low, probably not totaling over 100,000.[23]

From 1916 to 1938, Protestant efforts were characterized by an era of joint planning. Pan American Protestant Congresses were held in Panama in 1916, Montevideo in 1925, and Havana in 1929. Protestantism was able to gain a degree of social respectability in many regions through the publication of scholarly magazines such as La Nueva Democracia, and the establishment of the Y. M. C. A. The size of the Protestant community grew steadily, although not rapidly, and by 1938, there were over 600,000 members, who constituted .49 percent of the population.[24]

TABLE 1.—CHRONOLOGY OF THE ESTABLISHMENT OF SELECTED PROTESTANT SECTS IN MEXICO, CHILE, ARGENTINA, AND BRAZIL

Name of Sect	Date Established			
	Mexico	Chile	Argentina	Brazil
Anglican	*	1821	1818	*
Lutheran	*	1846	1843	1823
Presbyterian	1872	*	1836	1859
Methodist	1871	1877	1836	1880
Baptist	1864	1888	1886	1881
Congregational	1872	*	*	1885
Episcopalian	1868	*	*	1889
Church of the Nazarene	1903	*	1909	*
Assembly of God	1921	1942	*	1910
Church of Jesus Christ of Latter-day Saints	1879	1956	1925	1927
Pentecostal	*	1909**	1909**	1909**

* Data not available.

** The Pentecostal movement in South America originated as a breakoff from the Methodists in Chile in 1909 and quickly diffused to the Platine republics.

Source: Read and Ineson, p. 17; Vergara, pp. 9-11, 36-39, 201; Lunsford and Lunsford, pp. 47, 84; Monti, p. 11; Bridges, pp. 8-22; Damboriena, Vol. I, p. 18; "Area Conference in Southern South America," pp. 20, 24, 27.

The years since 1938 have witnessed a period of systematic and rapid diffusion of Protestantism in Latin America. The greatest growth has occurred among the Pentecostal groups, including the Assemblies of God, and newer, missionary-minded North American bodies including the Jehovah's Witnesses, Seventh Day Adventists, and Latter-day Saints. This was precipitated, in part, by the closing of much of the Far East missionary field at the outbreak of World War II. With the subsequent expansion of communism in that area, Protestant efforts switched to Latin America.

Current Status of Protestantism in Latin America

Accurate calculations of the number of Protestants in Latin America are impossible to obtain for many reasons. One obstacle is the divergent criteria utilized by the various sects for determining membership. Some, for instance, include children, others do not; some include baptized adults only, others include all "believers." Furthermore, the rapidly growing indigenous Pentecostal sects are extremely difficult to count accurately. The total number of persons included as Catholics plus the number of followers claimed by Protestant sects frequently totals more than the national population. Possible explanations include hesitancy of Protestants to reveal their religious affiliation, presumption of Catholic faith by census workers, and the numerous unstable individuals who are Catholics one day and Protestants the next.

Latin America Mission, Incorporated estimated the number of Protestants in Latin America in 1969 to be 10,000,000 to 20,000,000.[25] The respected World Christian Handbook placed the number at 14,082,286 in 1968.[26] Read predicted a total membership of 27,000,000, or 8 percent by

1980.[27] (See Appendices II and III for breakdown by country.) In all likelihood, then, the number of Protestants in Latin America today is between 20,000,000 and 30,000,000.

Protestant Growth in Mexico

The development of Protestantism in Mexico has paralleled closely the evangelical expansion in Latin America in general. Prior to the enactment of the Constitution of 1857, Protestantism was technically forbidden, and very little growth was achieved. With the constitutional triumph of liberalism, and the subsequent passage of the Reform Laws of 1859 and 1860, Protestantism was able to gain entrance into Mexico. In 1860 the American Bible Society began its labor in Mexico, and on January 30, 1864, the First Baptist Church of Monterrey was organized, marking the founding of the first Protestant church in that country.[28] The decade of the 1870's witnessed the establishment of several Protestant sects in Mexico, among them the Methodists (1871), Society of Friends (1871), Presbyterians (1872), Congregationalists (1872), and Latter-day Saints (1879).[29]

The Diaz regime was not anti-Protestant, but left the enforcement of religious freedom in the hands of local authorities. This had the effect of concentrating Protestantism in the large urban centers where protection could be relied upon. The fall of Diaz in 1910 precipitated a period of instability in Mexico, which in turn resulted in an era of religious unrest which continued until 1940. The 1917 Constitution is antireligious in nature, placing control of all religions in the hands of the federal government. By 1924, Catholic reaction to the Constitution developed into the so-called Cristero revolt, which led to government measures to restrict the number of Catholic priests. The situation worsened. By 1931, the state of Tabasco had prohibited ministers of any faith from conducting religious services, and the states of Chiapas and Veracruz suspended religious ceremonies altogether. By 1935 there were fewer than 500 practicing priests in the entire country, and less than one-half of the states had the services of any priests at all.[30]

Protestantism was both cursed and blessed by the lack of stability. The uncertainty tended to restrict Protestant initiative, yet at the same time, it did much to destroy the myth of Catholic Church infallibility. Therefore, in spite of the chaos of the era, Protestantism grew. Protestant membership increased from .38 percent of the population in 1900 to 73,951, or .52 percent by 1921. In the ensuing 19 years, membership totals increased over 130 percent to a total in 1940 of 177,954, or .9 percent of all Mexicans.[31] These figures reveal a steady, consistent growth.

Current Status and Strength of Protestantism in Mexico

The greatest Protestant growth in Mexico has occurred since 1940. Upon becoming president, Avila Camacho effected a truce with the Catholic Church in which the federal government and the church agreed to refrain from interfering in the other's affairs. Foreign missionaries were also permitted to resume proselyting efforts. With the ensuing relative calm, Protestantism has expanded rapidly. Conflicting data exist over the current number of Protestants in Mexico. The Mexican national census listed 330,026 Protestants, or 1.3 percent, in 1950; 578,515, or 1.7 percent, in 1960; and 876,879, or 1.8 percent in 1970.[32] Prudencio Damboriena, of the Department of Missiology of the Pontifical Gregorian

University in Rome, published a considerably higher estimate. He credited Mexico with 897,227, or 2.62 percent in 1961, and estimated that by 1980, fully 16 percent of Mexico's population will be Protestant.[33] Local Protestant leaders in Mexico estimated national membership as over 1,500,000 in 1964.[34] Anglo-American Protestant sources such as the World Christian Handbook, Rycroft and Clemmer, McGavran, and Bridges, placed the 1970 figure at roughly 1,100,000.[35] The author's personal field experience supports the belief that the actual figure is generally about double that of the national census, which in 1975 would result in an approximate total of 2,250,000, or 3.8 percent of Mexico's current 60,000,000 citizens.[36] Regardless of the precise number of adherents, it is readily apparent that Protestantism is increasing more rapidly than the overall national population. It should also be obvious that Protestants now constitute a minority in Mexico which has the potential to be influential in various aspects of national life.

Summary

It can be concluded that Catholicism, while long the universal church of Latin America, has probably never held the complete religious affections of the majority of the populace. When the constitutional triumph of liberalism and anticlericalism in many nations gave Protestantism the opportunity to begin active proselyting, it opened a large and receptive missionary field. Protestantism continues to increase more rapidly than the overall population, and in many countries now comprises an acknowledged and respected minority sector.

Notes

[1] Auge y Auge, p. 208.

[2] For detailed treatments of the ecclesiastical aspects of the conquest of Mexico, the reader is referred to Parkes, Cuevas, and Ricard.

[3] Coleman, p. 2.

[4] Houtart and Pin, p. 161. Houtart and Pin note that Catholicism as a generalized culture trait is "the ever-present danger."

[5] Mecham, pp. 416-417. Indicative of the nature of the conflict was the attitude of Benito Juarez who wanted Protestant missionaries in his country because they would teach the Indians to read rather than permit them "to waste time lighting candles to the saints." Quoted in Damboriena, Vol. I, p. 18.

[6] Mecham, p. 420.

[7] Willems, p. 35.

[8] Coleman, p. 32.

[9] Ibid., p. 1.

[10] Ibid., p. 2.

[11] Ibid., p. 21.

[12] Willems, p. 35.

[13] Read and Ineson, pp. 13, 15.

[14] Ibid., p. 14.

[15] Hurtado, as cited in Rycroft and Clemmer, p. 208.

[16] Houtart and Pin, p. 152.

[17] Willems, p. 35.

[18] Houtart and Pin, p. 166.

[19] Mecham, p. 422.

[20] Rycroft and Clemmer, pp. 206-207.

[21] Considine, p. 424.

[22] Vekemans, as cited in Rycroft and Clemmer, p. 207.

[23] Damboriena, Vol. II, pp. 17-33.

[24] Ibid., p. 16.

[25] Kenyon, p. 12.

[26] Coxill and Grubb, pp. 100-144.

[27] Read, as cited in Bridges, pp. 18-21.

[28] Bridges, p. 15.

[29] Ibid., pp. 8-22. Throughout the study, the Church of Jesus Christ of Latter-day Saints (L.D.S. or Mormons) will be grouped within the Protestant block. This is done for the sake of simplicity and owing to the similarity between some aspects of Mormon and fundamentalist Protestant doctrine. It should be recognized that the Latter-day Saint church is not Protestant since, unlike true Protestants who broke away in protest from the Catholic church, it claims to be the restored version of the original apostolic church organized by Christ, which, according to L.D.S. belief, was destroyed with the death of the early apostles.

[30] Ibid., p. 26.

[31] Ibid., pp. 79-83.

[32] México, Dirección General de Estadística, "Octavo Censo General de Población, 1960," Resumen General, 1962, p. 282; "Noveno Censo General de Población, 1970," compiled from each volume.

[33] Damboriena, Vol. I, pp. 38-41.

[34] Lewis, "Seventh Day Adventism in a Mexican Village: A Study in Motivation and Culture Change," p. 63.

[35] McGavran, p. 5; Coxill and Grubb, pp. 100-144; Bridges, p. 93; Rycroft and Clemmer, p. 234.

[36] Clawson, pp. 135-141. A letter survey conducted during 1973 revealed a minimum of twice as many Protestants in the cities of Veracruz and Cordoba, Veracruz state, as credited in the 1970 census. Since the survey was incomplete, in all likelihood the magnitude of the difference is even greater. The same conclusions have been borne out in Nealtican, where the 1970 census credited the municipio with 296 Protestants, but which, in 1975, the author found to number approximately 600. If a 1975 census were to be taken, past trends indicate that it would show Mexico as 1.9 percent Protestant. By doubling this, the author believes that 3.8 percent or 2,250,000 of Mexico's estimated 1975 population of 60,000,000 is Protestant.

CHAPTER FOUR

THE SETTING

The Physical Milieu

Location

The central heartland of the Republic of Mexico consists of a broad plateau. Shaped somewhat like a funnel, wide at the north and narrow at the south, the plateau rises steadily in elevation from 1,127 meters along the Texas border at El Paso, to over 2,200 meters at its southern limit. At 19 degrees north latitude, an ancient block fault is believed to have initiated geologic activity which has built up a series of volcanoes along an east-west alignment across the country. Within this volcanic belt lie seven large valleys, part of the plateau itself, yet separated from it by towering mountains. The most southern and eastern of these valleys is the valley of Puebla, whose flat floor extends some 66 kilometers north to south, and 79 kilometers east to west. The valley is delimited by four volcanoes. Citlaltépetl, or Mt. Orizaba (5,700 meters), at the eastern entrance to the valley, constitutes the dividing point between the environment and culture of the hot, humid lowland of the Veracruz gulf coast and that of the high, central plateau. Malinche (4,461 meters), at the northern limit, separates the valley from the tiny basin of Tlaxcala; the Tlaxcalans' loyalty to the Spanish invaders at the time of the conquest prompted the latter to grant their allies autonomy in perpetuity. To the west, the Puebla valley is separated from the valley of Mexico by two neighboring volcanoes, the symmetrical Popocatépetl (5,452 meters), and the multisummited Iztaccíhuatl (5,286 meters). At the eastern base of Popocatépetl lies the small village of San Buenaventura Nealtican, which serves as the administrative center of a tiny (62.5 square kilometers) municipio, or county, of the same name (Figure 1). The village is situated centrally, like a hub of a wheel, with spokes, or roads, radiating out to several nearby market towns and cities, including Atlisco, Huejotzingo, San Martín Texmelucan, and Cholula. The latter is now almost a suburb of the giant city of Puebla de los Angeles, the nation's fourth largest urban center, and the administrative, economic, and ecclesiastical capital of the valley (Figure 2).

Geology

A location at the base of an active volcano has attendant advantages and disadvantages. Included in the former are a magnificent view and rich soil obtained from weathered volcanic lava and ash. The value of these assets is somewhat ameliorated, however, by the constant danger of destruction from eruptions. The history of human occupancy in the region is thus tightly interwoven with its geologic past. Ceramic finds in the area indicate that it was inhabited at least as early as 350 to 150 B.C., during the middle pre-Classic period. The region was also populated during the middle-Teotihuacán period from 300 to 500 A.D., and continuously thereafter until approximately 1150 A.D., at which time a massive volcanic eruption buried everything in the area, including corn, beans, and fruit trees.[1] This eruption may have been responsible for the deposition of a layer of pumice up to 2.5 meters deep. This light, bubbly substance, called Xaltete or Tepetate by the local peoples, is

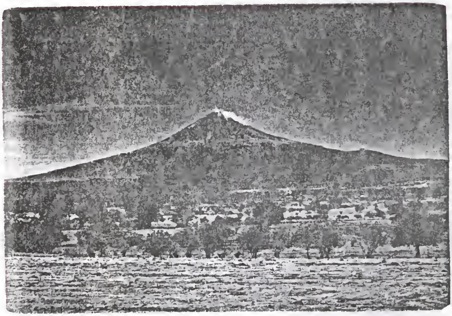

FIGURE 1. MUNICIPIO OF NEALTICAN

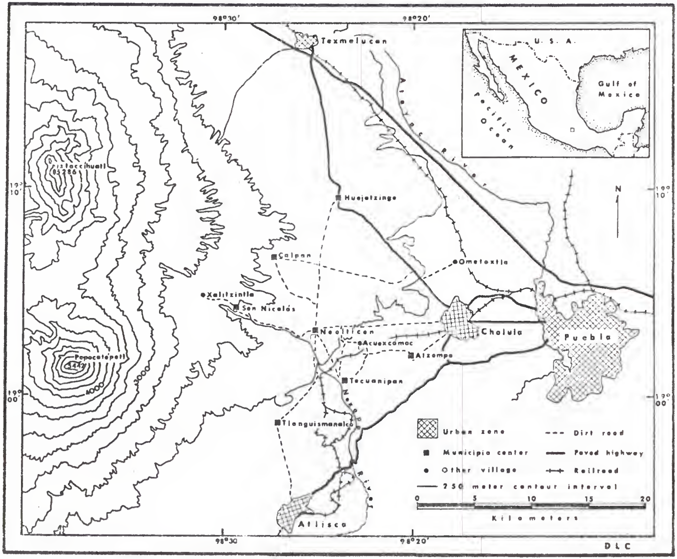

FIGURE 2. NEALTICAN AND SURROUNDING REGION

presently valued as a construction material in the making of concrete blocks and as a roofing substance for buildings in the nearby urban centers.

In recorded times, volcanic activity within Popocatépetl has tended to occur in phases lasting several years. The earliest of these struck between 1347 and 1354, followed by a phase lasting from 1519 to 1539, another in 1664, and the most recent from 1919 to 1938. Although this latter cycle did not include any lava flows, the heat from within the volcano was intense enough to melt off completely the glaciers which normally cover the upper reaches of the mountain year around.[2]

The Soil

The soil of Nealtican has formed primarily from the ejecta of Popocatépetl. The eastern section of the municipio consists of low, rolling hills, overlaid by layers of sandy volcanic ash as much as 10 meters deep. The soil of those areas in which the Xaltete is overlaid by layers of sandy volcanic ash has a relatively dark grayish color and is called tierra negra, or black earth, by the villagers. In other areas, especially along hill tops in the northwestern section of the municipio, the top layer of ash has eroded away, leaving exposed the yellow-colored Xaltete, called tierra amarilla. The black earth zones are porous, friable, and relatively fertile. They are highly valued as agricultural lands. In contrast, the tierra amarilla is relatively infertile and, in addition, forms a hardpan during the dry season, thereby forcing the farmers to delay plowing until after the rains have commenced. This puts the farmer behind schedule in the moisture-based agricultural cycle, and has a highly prejudicial effect on yields. Consequently, tierra amarilla is poorly regarded for agricultural purposes.

The western part of the _municipio_, commencing at the village itself, experiences an increase in the vertical slope of eight degrees toward the west and three degrees toward the north.[3] This section, consisting of the lower reaches of the volcano, is rugged and hilly. Most of the topsoil has long since washed eastward, exposing numerous volcanic boulders and an elevated sill to the south. The latter is called _Malpaís_, or bad country, by the villagers. Soil profiles taken in this western region, while not identical, are similar, and can be generalized as follows.[4]

The top 40 to 47 centimeters constitute the upper layer. The color is varying shades of gray. Its composition is predominantly pebble-sized pumice, overlain in some areas by a thin layer of sandy ash. It has a low water content.

The middle horizon extends down to 87 to 95 centimeters, and consists entirely of walnut-sized pumice of low water content.

The third layer, reaching approximately 200 centimeters in depth, consists of yellow or coffee-colored fine-grained pumice intermixed with pyroclastic lapilli as large as a fist, and black volcanic ash. It has a high water content.

Between 200 and 270 centimeters, one encounters yellow to obscure coffee-colored, fine-grained, humid ash.

Throughout the entire municipio, the soil has a very low organic matter content, varying between .49 and 1.0 percent.[5] Even before the advent of man, the torrential summer rains tended to prevent a buildup of humus and organic matter in the soil, naturally sandy in texture, and centuries of cultivation have given the summer rains optimum opportunity to leach essential nutrients, particularly nitrogen, from this sandy soil.

Climate

In the low tropical latitudes, climates are determined by altitude, which dictates the temperature, and by the seasonal latitudinal shifts of the world's major wind and pressure belts which control the amount and seasonality of precipitation.

Nealtican's altitude of 2,350 meters results in cool summers and moderately cold winters. Her latitude of 19 degrees north places the village in the path of the equatorial low pressure belt during the summer and of the subtropical high pressure belt in winter; the result is a pronounced monsoonal climate with high summer precipitation and extreme winter drought.

The cold season lasts from mid-November to the end of January. Weather during these months consists of clear cold nights and cool days, with highs reaching into the fifties and lower sixties and lows varying between 40 and 25 degrees Fahrenheit. It is a picturesque time of the year. At night the village lies under an endless dome of stars which are so bright that the observer feels completely surrounded by the heavenly spheres. The days are sparkling clear and invigorating and given added beauty by the scarlet red petals of the leafless colorín tree silhouetted against the deep blue sky. These scenes are broken only occasionally by the passage of a rare polar cold front pushing its way south from the United States. From his doorway, the villager can watch the clouds sweeping down over Popo, alternately obscuring the peak from view, and breaking to reveal a breathtaking scene of glittering sunshine reflecting off a new coat of snow. These fronts are responsible for the scant moisture received during the dry season, and for mild frosts which occur three to five times each winter, the morning following the passage of a front. The latter restrict agriculture in irrigated regions near Nealtican to cold-resistant crops such as cauliflower, cabbage, and lettuce.

Sometime around the end of January, the cold season suddenly ends, usually accompanied by the passage of a storm. After a day of rain, the next day will dawn warm and mild, instead of bitterly cold. Seemingly overnight, the leaves have budded and once-dead grasses and herbs come back to life. Just as suddenly, the forced idleness of the community ceases as the villagers hasten to turn the land in preparation for the approaching planting while it is still soft from the rain. As February passes into March and then April and May, the temperature continues to climb, but little additional moisture falls. Uneven surface heating causes windy days throughout the entire central plateau and vast quantities of dust from the dry, plowed fields are picked up and suspended in the air, often for weeks and months at a time. The sky, although cloudless, is heavily polluted with dust and man-made particles from the nearby industrial centers of Puebla and Mexico City. Visibility is often reduced to less than ten kilometers. This is the hottest period of the year, with the daytime highs climbing into the 80's and nighttime lows in the 50's and 60's. All who work outdoors must wear hats to avoid being burned by the intense rays of the sun. Day after day the villagers wait and watch, without relief, for the rains to come. The long-awaited clouds begin to gather during the last days of April, but initially refuse to drop their moisture. Finally, around the middle of May, the thunderstorms begin, marking the beginning of summer. At first the thunderstorms are infrequent, occurring every four to seven days. By mid-June, however, it is unlikely that the village will go more than two days in succession without a thunderstorm. Early each afternoon, towering cumulous clouds form in the sky as the result of strong convection currents. They rapidly increase in numbers until the sky is completely overcast around 2:00 or 3:00 P.M. Then the heavens seemingly open and a downpour lasting half an hour to an hour occurs, cleaning the dust out of the air and filtering rapidly down through the sandy streets. Occasionally, hail, rather than rain will fall, bringing widespread damage to the crops. Then, just as suddenly, the rain stops, the clouds break, and the sun appears for the remainder of the afternoon. The afternoon thunderstorms have a marked cooling effect, with the result that the months of June through September are cooler than April and May (Table 2).

With the southward passage of the sun, fall comes to the region in October and November. The thunderstorms, while still heavy, occur with diminishing frequency. The fully developed corn and beans dry and harden on dead plants in fields of blooming wild flowers. The days are warm and the nights cool, with highs in the 70's and lows in the 40's. Popo stands with its lowest snowline, prepared to provide water during the ensuing dry winter as the snow melts.

Water Resources

Insufficient water supplies constitute the principal block to further economic development of the municipio. The shortage is caused by a combination of economic, natural, and cultural factors. Abundant supplies of ground water exist, with the water table located near the 80 meter depth. This water can most easily be extracted by wells with motor-driven pumps, however, and the cost of the wells places them out of the reach of the average villager, who is thus entirely dependent upon rains and surface runoff.

TABLE 2.—MONTHLY AND ANNUAL MEAN TEMPERATURES
AND PRECIPITATION OF PUEBLA, PUEBLA

Month	Temperature in Degrees Fahrenheit	Precipitation in Inches
January	54.3	0.3
February	57.0	0.4
March	61.2	0.4
April	64.6	1.0
May	67.6	3.3
June	64.0	6.8
July	63.0	7.0
August	63.3	5.6
September	62.1	6.1
October	60.4	2.5
November	57.9	1.0
December	54.7	0.4
YEAR	60.8	34.8

Source: James, p. 900.

The great majority of the village's available water comes from the Nexapa River, a small stream which, draining the upper slopes of Popocatepetl, passes near Nealtican before eventually emptying into the Balsas River. The bed of the Nexapa follows the volcanic sill called Malpaís, in the southwest section of the municipio. At a point about a kilometer above the village, the water is diverted through a large irrigation ditch to a small, bowl-shaped, dirt-floored reservoir about 30 meters in diameter and 3 meters deep in the middle, known locally as the Jaguey. From there the water is released, flowing eastward by the force of gravity, into a network of smaller ditches within the village. When the villager needs water for any purpose, be it cooking, drinking, bathing, or washing clothes, he must obtain it from the nearest ditch. This is usually accomplished by dipping two five-gallon tins attached to the ends of a stick or rod into the water in the ditch. The tins are then carried on one's shoulders back to the home, and the process is repeated as often as necessary. The task is burdensome and slow, even if pack animals are utilized to carry larger quantities.

During the rainy season, the runoff from the higher slopes is heavy and supplies are adequate for the entire town. In addition, rainwater can be captured in cisterns from roof runoff, providing a relatively pure source of drinking water.

During the dry season, however, the situation changes. As the rains cease, available water becomes almost entirely dependent upon melted snows. This greatly reduces the volume of flow, and creates an increasingly severe situation as months pass without rain. The water, rather than flowing at all hours through the ditches, is rationed and permitted to flow only in selected ditches for a restricted number of hours on a limited number of days of the week. With no rain, the cisterns run dry and water from the ditches must be used for drinking. This is particularly unfortunate because as the volume of the stream decreases, the water, which is used for washing clothes and for the disposal of garbage and excrement in other villages further up the slopes, becomes increasingly contaminated. By mid-February most of the snow has melted and the situation is approaching the critical stage. The months of March and April are even worse. The flow of the Nexapa has dwindled to almost nothing and the entire village of 7,000 is dependent upon a tiny trickle of water which is released from the Jaguey for a few hours each day (Figure 3). Needless to say, consumption is minimal and often eliminated in all but the most essential functions.

The situation is rendered more tragic by the fact that the village, in cooperation with the federal government, has already financed the drilling of a well to provide potable water. The well is capped, however, owing to a rumor that the water has been poisoned by one of the village's two mutually antagonistic political factions.

Vegetation

The natural vegetation of the region is forests of mixed hard and softwoods. More than 2,000 years of constant use by man, however, has resulted in an almost completely manmade landscape.

At present, the land of the more level eastern half of the municipio has been cleared of almost all native trees and grasses and consists of fields of corn or beans interspersed with rows of fruit trees. The rugged western portion of the municipio is mostly covered by secondary forests, the oldest trees being approximately 35 years of age. The most

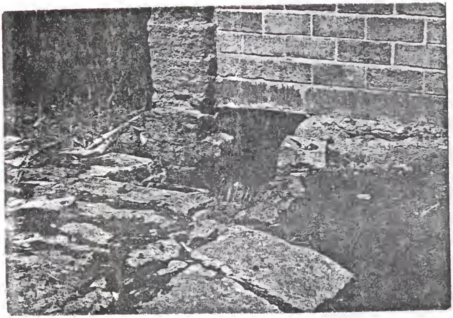

FIGURE 3. NEALTICAN WATER SUPPLY DURING THE DRY SEASON

common varieties include pinus teocote, pinus leiophylla, quercus crassipes/mexicana, quercus crassifolia, quercus rugosa, and arbutus glandulosa (madrono).[6]

The Cultural Milieu

Agrarian Atmosphere

The first impression that the village usually makes on a visitor is its completely agrarian atmosphere, which is highly unusual in a village of 7,000 population. Except for a federally owned and operated grade school, which stands out like the cultural intrusion that it is, the village is almost totally devoid of urban functions. There are no cafes or restaurants, no movie theater or supermarket. There are no service stations or hotels. Of the four repair shops, one is operated by a full-time welder and ironsmith, two others by individuals who have converted part of their family compounds into part-time repair shops for internal combustion engines, and another by a fourth man whose electric air-compressor earns him a few pesos a week inflating tires. The only other commercial establishments in the village are about 38 tiny family-operated stores, most of which are located in a room within the family compound, often, but not always, at a corner of a street intersection. The largest of these carries only minute quantities of staples such as flour, sugar, and pasta, a few cans of condensed milk and chiles Xalapeños, and a few fresh tomatoes, oranges, and bananas, as well as small quantities of miscellaneous items such as eggs, candles, baking powder, salt, matches, penny candies and cookies, and hard buns called bolillos. The quantity, quality, and variety of the inventory of the smaller "stores" is, of course, even less. The one item that almost all have in ample supply, however, is bottled beer and/or soda pop. This in itself is a strong clue to the way much of the money in the village is spent. In addition to the stores, there are three or four family-owned electric corn grinders, called tortillerías, or "tortilla shops." The name is misleading, however, because they are neither shops, nor do they actually press the tortillas. The only other outpost of urbanization is an ancient building located at one corner of the town square, or zócalo, which, in addition to serving as living quarters for a family, has a "store" in front with the village telephone inside, and officially serves as the receptacle of any letter addressed to a citizen of Nealtican (Figure 4).

A Typical Day

Much can be learned of the culture of the villagers by studying the activities of family members on a hypothetically typical day. The day begins around 6:00 A.M. as the first light of morning enters the family compound. Everyone arises to the accompaniment of cackling poultry and barking dogs. Father and any children who are not in school dress and go immediately to harness the animals. After seeing that the two-wheeled cart is securely fastened and the plow and other needed tools set in the cart, they leave home immediately, driving through the almost deserted streets of the village on their way to the fields, where they begin a long day of labor.

As soon as father has left, mother busies herself preparing a small breakfast for the remaining children. After breakfast, the school-age youngsters have an hour or so to help with the chores before walking over to the school, which begins sometime between 8:00 and 8:30 A.M. At

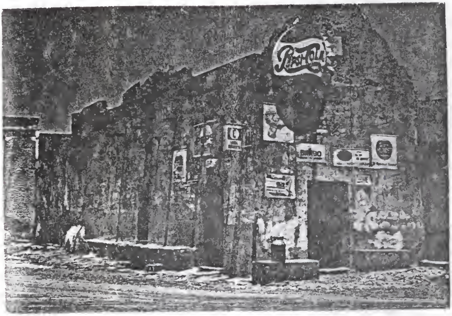

FIGURE 4. NEALTICAN POST OFFICE AND TELEPHONE OUTLET

about 7:45 A.M., as if on a signal, the doors of the family compounds swing open and hundreds of laughing, playful children converge in the streets on their way to school. If it is a special day, they will wear their uniforms, light tan dresses for the girls and tan shirts and dark brown trousers for the boys, or if there is no special event, they'll dress in their homemade pants, shirts, and dresses of every imaginable color. Regardless, many of the boys and most of the girls will be barefoot.

Within 10 or 15 minutes, the children have entered the school and, just as suddenly, the streets are again deserted and silent. The peace is soon broken, however, by strange popping sounds which fill the air. They come from the engines used to run the tortillería machines. With men and children gone, the women are now free to do their housework and visit. Mother straps baby to her back with a shawl, or rebozo, and takes the five-gallon tin of shelled corn which has been soaking overnight down to the tortillería to be ground, being careful to lock the door behind her. As she walks down the street, she hears the distant horn of the coming bus, telling those who are going to town to hurry and catch it. She also passes the corner bar where the latest folk hit, called a ranchería, is blaring from a dust-covered jukebox. She hears shouts and arguments coming from within the bar and sees a half-naked man lying drunk and unconscious in the nearby street. When she arrives at the tortillería, she finds that there are already 15 other ladies in line ahead of her, but she doesn't mind the wait, since it gives her a chance to get caught up on the latest news and gossip. After she has paid the grinder 20 centavos, she carries her ground corn, or masa, back home. If it is her day to have the water running down the ditch on her block, she will take the dirty clothes over to the spot along the ditch where she leaves her scrubbing stone and, on her knees, scrub the laundry in the cold water, with baby still secure in the rebozo. Although she would like to work slowly and visit longer with her neighbors, mother must hurry because father and the older boys will be expecting their morning meal soon. After finishing the washing, mother carries the clothes back into the compound where she lays them out to dry in the sun which is now quite high in the sky as it is getting close to 10:00 A.M. Mother deftly pats out 15 to 25 tortillas for each family member and wraps them in a cloth to stay warm. She takes the pot of boiling beans off the fire, and places it, the tortillas, and some chili peppers into a large basket, which she covers with another cloth. Taking the basket she leaves the compound for the field, taking care to make sure the door is locked. Baby is still securely wrapped in the rebozo on her back where he can be reached for nursing at any time.

Mother walks out to the field and, spreading the cloth down on the ground, dips the boiled beans into bowls and calls father and the boys over to eat. They are grateful, since they have been plowing since 7:00 A.M. without breakfast, and are very hungry. The meal is unhurried and gives the family a chance to be together and visit. After it is over, mother puts the remaining tortillas and beans back in the basket, and joins father and the children in their work, with baby still on her back. The family works hard and much is accomplished. Still, much remains to be done. Soon it is 1:30 or 2:00 P.M. and time for the second meal. The family returns to the basket and, searching out a shady place to sit, finishes the tortillas and beans. Afterwards, mother says goodbye and, carrying the basket, returns to the village; baby is still securely on her back. She must hurry because the children will soon be out of school. Father and the older children continue working in the field until about 5:00 P.M., when just before sundown they also return to the village. As the fathers return from the fields, the streets are full of children playing, and thin, flea-bitten dogs alternately barking at giggling children or at the passing horses pulling the carts.

Around 6:00 o'clock, the sun quickly sets behind Popo and the warmth of the day rapidly changes into cold night air. The streets become deserted as all the family members withdraw into the compound, for it is dangerous to be outside at night. A couple of hours of free time, the first all day, permit the family to listen to a radio station from Puebla, read, study, or talk. By 8:00 or 9:00 P.M., everyone is asleep and the town is quiet.

Occupational Stratification

There is almost no occupational stratification in the village. All are farmers, or campesinos. The only exception is the ironsmith--Joel Ramos. He grew up in Atlisco where he learned his trade, and married a girl from Nealtican. She finally convinced him to move to the village where he has been extremely successful financially. Most of his trade consists of constructing metal doors and bean cultivators, called escaladoras. His income has permitted him to build the nicest house in town, a modern three-bedroom cinderblock structure equipped with television and gas water heater. All others in the village who engage in commerce or services of any kind do so as a secondary pursuit. They are campesinos first, and businessmen second. Consequently, their attitudes and outlooks are those of campesinos, unless modified by other factors which will be discussed later.

Life Inside and Outside the Compound

Life in Nealtican revolves around the nuclear family consisting of father, mother, and children. Occasionally, if circumstances warrant, the grandparents also reside with the family. This occurs most often in cases where the parents are going to inherit the compound. Rather than moving out and going to the expense of building another home, they will remain with the grandparents. Under such circumstances, the father will gradually, as the grandfather ages, take over more and more of the patriarchal duties of presiding as head of the family. The turning point is usually when the grandfather turns his remaining land over to the father. This act has the de facto result of making the father the head of the compound, although as long as the grandfather lives, he will be considered the de jure head of the household and will receive considerable ritualistic respect and honor.

The nuclear family lives in a compound which, depending upon preferences and wealth, may include some or all of the following roofed areas: bedroom, kitchen, storage shed, corn crib, animal stalls, and poultry coop, all generally surrounding a central, unroofed patio or working area (Figure 5).

Property lots in the village are completely walled for protection and privacy. Neighbors will share the same wall, so that the compounds border each other, with no open space in between. Lawns are unheard of, and the walls extend to the edge of the sidewalkless streets. Windows, while not uncommon in the interior, patio-facing walls of the bedroom

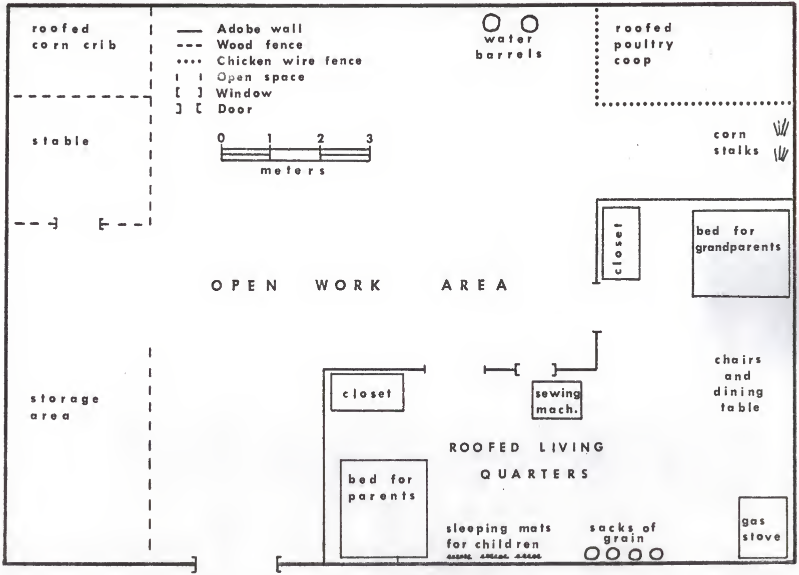

FIGURE 5. FAMILY COMPOUND

and kitchen, are never built into the outer walls which are made of adobe approximately .5 meter thick. Entrance to the compounds is gained through two wooden doors which can be latched from the inside and tied shut from the outside. To a person walking the streets, the compounds have the appearance of garrisons or forts, as one sees nothing but walls on both sides, often as high as the street is wide.

When laying out a compound, it is essential that drainage be provided. The floors of the roofed rooms are raised about 100 to 200 centimeters above the level of the central patio, and sloped gently to converge at the entrance; a drainage hole is then constructed beneath the doorway, so that all water within the rooms will drain into the central patio. The patio, or work area, is also gently sloped toward the compound entrance where another drainage hole is made, thereby allowing all water within the compound to drain into the streets. This arrangement is particularly valuable during the rainy season.

The compound is the fortress from which the family defends itself against a hostile world. Thus, every valuable, except the agricultural fields themselves, is stored in the compound, including all household holdings, animals and poultry, and agricultural produce and equipment. The compound thus fulfills the multiple needs of a living, storage, and work area. Depending upon the wealth and size of the family, one or more bedrooms will be built, and if space and money permit, a separate kitchen. These areas are roofed and the floors cemented in all but the poorest compounds. In addition to living quarters, roofed, but not adobe-walled areas serve as corn cribs, as storage space for tools and other miscellanea, and as animal and poultry shelters. The central patio may be cemented, but is generally of compacted dirt, and is used for work and as a play area for the children. In one part, dried corn stalks, called zacate, are likely to be stored for animal feed. It is also used for drying the ears of corn in the fall, bathing, and countless other activities. The compound is sacrosanct and a guest would never enter the outer doors without first announcing himself and obtaining permission.

Life and family relationships within the compound are often quite different from that outside its walls. In public, one generally communicates in Spanish. Within the compounds, however, the more traditional Nahuatl is often used, especially among the older generation. Parents and grandparents are very concerned that Nahuatl is not taught in the public school and predict that within a generation or two, its use will disappear.

Within the compounds, disciplining of children, arguments between husband and wife, and parents and children, or parents and grandparents, can take place without fear that the neighbors and the rest of the village will learn of them. Outside the compound, however, great care is made to avoid any public displays of emotion, be they love or hate.

In like manner, within the compounds, and to a lesser extent within the village, the older generation can dress in the traditional clothing. For the men, this is loose-fitting white trousers and a long-sleeved white shirt, and either bare feet or sandals. For the women, it is braided hair, four or five skirts and four or five blouses, the outer skirt which extends to the feet often being black and the outer blouse, which is long-sleeved and buttons up to the neck in front, a colorful red, yellow, green or blue; they are always barefoot. Outside the compound, or village, however, the trend is toward western-style clothes, including shoes. The men tend to change faster than the women in this respect, and some of the most modern will now make the bus trip into Puebla without the traditional straw hat.

Health and Sanitation

The health of the villagers is surprisingly good. Owing perhaps to centuries of exposure, the people have built up immunities to conditions that would cause an outsider to become seriously ill. Bathrooms, of course, do not exist. The people train their children to defecate, when possible, outside the compound, preferably in the field, but if not, then along some open space nearby or in the street. Although dirt is everywhere, comprising both the walls and floors of most compounds, the floors, even if of dirt, are swept, and food is kept clean. In earlier times, goiter was a frequent affliction, but very few cases occur today. At present, the most common ailments are colds and the flu, which occur most frequently during the cold winter months, during which time the homes remained unheated, and the poor, weakened by the ravages of malnutrition and insufficient clothing, readily succumb to infection.

[1] Seele, pp. 81-82.

[2] Yarza de De La Torre, p. 134; Tamayo, Vol. 1, p. 221; Seele, p. 83.

[3] Seele, p. 77.

[4] *Ibid.*, pp. 77-79.

[5] Miguel Sánchez Hernández, field director of *Zona III, Plan Puebla*, Puebla, Puebla, Mexico, interview February 20, 1975.

[6] Seele, p. 78.

CHAPTER FIVE

NEALTICAN: THE LAND

Conditions Prior to 1910

The Founding

Although archaeological evidence supports the belief that the Nealtican region has been inhabited continuously since the volcanic eruption of 1150 A.D., very little is known about the founding of the village. Most villagers, never having been privileged to observe the contents of the archives kept in the sacristy of the local church, base their knowledge of the town's founding on hearsay. According to these widely accepted accounts, Nealtican was founded long before the arrival of the Spaniards by seven families of Indians. The origin of these families is uncertain, but it is believed that they brought with them a stone cross, "la cruz de piedra." As evidence of this account, villagers refer to a large cement-covered stone cross approximately 3 meters high, 2 meters wide, and 12 to 15 centimeters thick, which is mounted on a roadside altar one block north of the Catholic church. The second piece of evidence cited is an ancient map kept among the archival records which most of the villagers know exists, yet have never seen. The map, drawn in water colors on thick parchment, shows seven men and a stone cross, and is said to depict the village founding (Figure 6). The Indian name, Nealtican, meaning "the place where one bathes"[1] is also cited by the townspeople as evidence of the village's preconquest founding.

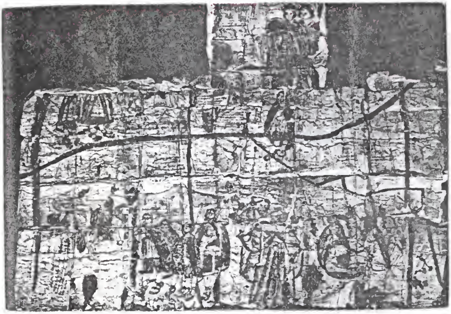

FIGURE 6. MAP DEPICTING THE FOUNDING OF NEALTICAN

The name owes its origin, according to popular account, to the fact that a natural spring flowed anciently in the area. When Cortez' band passed through on their way to Tenochitlán, legend has it that Malinche, Cortez' Aztec wife, bathed in the spring, which mysteriously ceased to flow shortly thereafter and has remained dry to the present day.

There is a significant flaw in this generally accepted explanation of the village's founding. While it is true that the map does show seven men, the men depicted are unquestionably Spaniards, not Indians. One of the seven is a friar complete with brown robes and bald head.

In spite of this discrepancy, good evidence exists to support the claim that the village was first founded by Indians. It is known that the entire region, including Cholula and Huejotzingo, was inhabited by Indians at the time of the arrival of the Spaniards. A second evidence is the dual names of the villages throughout the region. In almost every instance, the first name is Spanish and the second Indian, presumably a version of the preconquest name of the village. Examples include San Gabriel Ometoxtla, Santa María Acuexcómac, San Andrés Calpan, San Jerónimo Tecuanipan, San Juan Tianguismanalco, and in our case, San Buenaventura Nealtican. Those cities which are known to have been founded by the Spaniards were, of course, given no Indian names. Thus the capital city, Puebla, is Puebla de los Angeles, or more recently, Puebla de Zaragoza. Another example is the small town situated some four kilometers west of Nealtican up the slopes of Popocatépetl, San Nicolás de los Ranchos. Established originally as a Spanish ranch, or rancho, it remains to this day a mestizo village in contrast to Nealtican, which is overwhelmingly Indian in race and culture.

Based on the information presented thus far, the following sequence of events is proposed. The land that at present comprises the village of Nealtican was inhabited for centuries, perhaps millenia, prior to the advent of the Spaniards. Owing to the fact that the Aztecs generally utilized a nucleated settlement pattern, a small village likely existed in the region. The name of the village may have been Chalalopán Altican, which name is recorded in document number 22, dated August, 1546, in the local church archives. Another section of the same document records that on March 1, 1661, Don Juan Carrero, mayor of the village of Atlisco, authorized the official founding of the village. It was perhaps at that time that the incidents took place that gave rise to the popular account of the founding of the village by the seven families. It is quite conceivable that seven Spanish nobles made a symbolic excursion from Atlisco to Nealtican on horseback, arriving on May 3rd, the day of the Cross, to grant the village officially the status of pueblo, or town. As a symbol of their piety, they could have carried, or dragged behind them, a small stone cross which, according to local accounts, still comprises the core of the larger, cement-coated cross at the shrine a block from the church. The travelers could have dedicated the church site without having effected any permanent cultural or racial changes before returning to reside in the more refined and hospitable environment of Atlisco.

While this is speculation, it is consistent with other available facts relating to the early history of the region. Throughout the entire colonial era, Nealtican was under the jurisdiction of San Juan Tianguismanalco, whose parish records contain an enumeration of all ordinances performed on behalf of the people of Nealtican. An analysis of microfilmed copies of the records reveals that the earliest entries are found in a Book of Baptisms, dated 1625 to 1643.[2] Neither this book nor any of the other records, kept partly in Spanish and partly in Nahuatl until 1691, contains any mention of San Buenaventura Nealtican. At that date, the records of the parish became complete and detailed, owing, apparently, to the arrival of a dedicated friar named Juan Bermúdez. It is in 1691 that the first mention of a sacrament being performed for anyone from Nealtican appears, when on June 25th, Simón de la Cruz married María Melchora.[3] From that date henceforth, numerous Nealtican entries appear, which fact is consistent with an official founding date of 1661. A second evidence for an official 1661 founding date is the fact that the Catholic church was completed, according to a permanent record baked in Talavera tile and laid around the dome of the edifice, in 1739, which would indicate that the church was approximately 80 years in the building.

Land Use

Although Mexico's colonial era officially ended in 1821 with the achievement of independence, the change brought little relief for the nation's rural Indian population. On the great haciendas, life continued much as before only now the "ricos," or hacendados, were American-, rather than European-born, Spaniards. The degradation of the Indian peasant reached its zenith, perhaps, in the Diaz era, which immediately preceded and prompted the great upheaval of 1910. The village elders, most of whom worked the land prior to 1910, harbor extremely sad and often bitter reflections of pre-Revolution conditions.

The lands surrounding the village were divided among three haciendas and two ranchos, with the extensions of Cruz de Piedra and Guerrero streets, and Central and Mendoza streets serving as east-west and north-south boundary lines respectively (Figure 7). To the southwest, the lands belonged to the hacienda of San Antonio Petlachícac. To the southeast, they belonged to the hacienda Teyécac, which at the end of the colonial era was owned by the Rojas family. The rancho La Rioja was also situated in this quadrant. The lands to the northwest of the village belonged to the rancho Santa Cruz Tetimpa, whose boundaries extended westward to meet the lands of Amecameca in the valley of Mexico. Sometime during the colonial era this rancho was merged to the hacienda San Benito, whose owners controlled the land to the northeast of the settlement. The ruined remains of this hacienda can still be visited a few kilometers north of the village.

The haciendas were huge, imposing structures, constructed of the finest stone and other building materials available in the region. While their Spanish inhabitants lived in opulence and comfort, the Indian villagers struggled to continue their wretched existence. "We were all slaves," recalls Librado Luna. "The slavery was so severe for the Indians!" The Indian workers were required to present themselves at the hacienda each morning at 3:30 A.M. to worship God. If they were late, their pay for the day was reduced. By 5:00 or 5:30 A.M., the Indians were working in the fields where they toiled, frequently being forced to carry bags of grain weighing as much as 100 kilos, until sundown. The only rest period came at the noon meal which was brought to the men in the fields by their families, at their own expense. For this their daily salary was 25 centavos. The villagers were compelled to continue this schedule month after month, in spite of illness or other problems, for "the Spaniards did not care if a Mexican died."

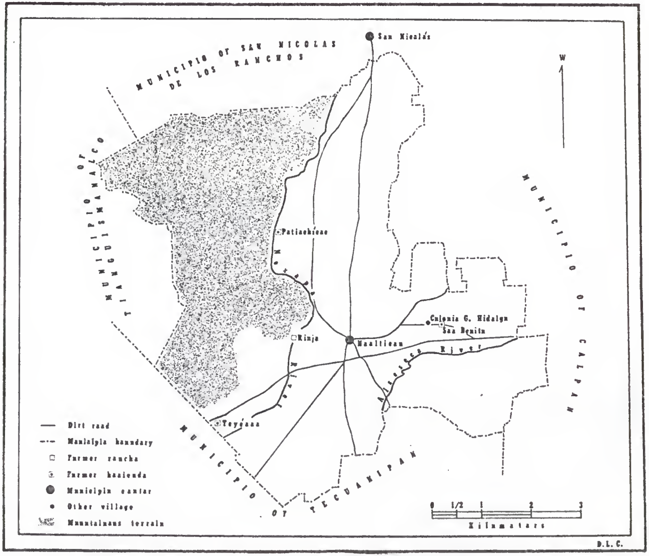

FIGURE 7. PRE-1910 RANCHOS AND HACIENDAS IN THE NEALTICAN REGION

Private land, to own and to work as one saw fit, was beyond the hope of the Nealtican villager. In an effort to supplement his miniscule income from the hacienda, the villager turned to the bounty of Popocatépetl. There on the slopes, abundant supplies of wood were available to be made into charcoal which could be sold in the markets of the distant towns and cities. As more and more villagers became carboneros, or charcoal makers, the available supplies of wood began to dwindle, forcing the men to search further and further up the slope. Pablo Luna recalls that around 1900, he, his father, and their donkey would leave the village at 3:00 A.M., and walk barefoot up slope for two hours before reaching a good wooded area. There they would labor all day with axe and machete to cut the wood and burn it slowly in the oven. By working hard they could make 200 kilos of charcoal in a day and return home by nightfall. The next day they would be off again, this time on a three-hour walk eastward to Cholula where they sold the charcoal for one centavo per kilo, before making the return trip to the village. Their efforts had brought them two pesos, or one peso (U. S. $.50) per day. Shortly thereafter, just prior to the Revolution, the value of charcoal increased, first to two and then to four centavos per kilo for a daily profit of four pesos. Little as it was, it was considerably more than the 25 to 50 centavos paid daily by the hacendados.

The land, like the villagers, suffered severe deprivations. The economy of the region was oriented toward exports. The major crops of the haciendas were the maguey cactus, whose juice could be turned into pulque or tequila for sale to urbanites and foreigners, wheat, then corn, and finally beans. The fact that this did not leave enough food for the villagers was not a concern of the hacendados. The situation was made more serious by the low fertility of the land, which, after countless years of cultivation without fertilizer, was nearly devoid of nutrients. Corn plants, too thin and weak to yield a harvest, grew to only one meter in height on land used only every other year. The beans did only slightly better.

A government questionnaire, dated June 30, 1884, asked how the people made their living. Response: "There are very few workers of the land and in general the people are hired hands and charcoal makers." Another question revealed that the harvest of 1883 consisted of 25 to 30 cargas (bags) of beans, with a value of 9 pesos per carga, and 200 cargas of corn at a value of 6 pesos each.[4] If one assumes that a carga, then as now, weighed some 160 kilos, we find that the production of food crops for domestic consumption totaled only 32,000 kilos of corn and 4,800 kilos of beans, which at present consumption rates would feed only 75 villagers (Table 7). While it is possible that underreporting occurred, it is evident that the region was not self-supporting in terms of basic foodstuffs.

Post-1910 Conditions

The Revolution

Given this background, it is not difficult to understand why the Revolution of 1910 took as its rallying cry, tierra y libertad, meaning land and liberty. In Nealtican and the neighboring regions, the struggle brought severe hardship to the villagers. As in all wars, the innocent were frequently those who suffered most. After Venustiano Carranza had gained control of most of the country, one of the great leaders of the Revolution, Emiliano Zapata, continued to resist, deriving support and protection from the inhabitants of the rugged regions surrounding Popocatépetl and Iztaccíhuatl in the states of Puebla, Morelos, and Mexico. Old-timers recall that Nealtican was cursed with several visits from these two leaders, as first one and then the other would possess the area in search of suspected enemies. The people of Nealtican were in a no-win situation where they were automatically classified, depending on whose forces were in the region at the moment, as being enemy sympathizers. The continued presence of the soldiers placed an unbearable strain on the already grossly inadequate food supply. The cultivated fields were often trodden under. Moreover, horses and soldiers were given priority to eat before the villagers. This culminated in a famine in 1916 which occurred in spite of normal harvests. "The soldiers ate all the tortillas. The people were so desperate that they made tortillas out of the tassels of corn stalks. They were forced to eat the leaves of the maguey and other cactus plants."

Land Redistribution

By 1917 the great internal upheaval was almost over. Zapata had been killed on his way to Veracruz trying to flee, so rumor had it, with huge sums of cash. Those who survived settled down to the business of redistributing the land. Even prior to the outbreak of violence, some of the hacendados apparently had the foresight to sell out. The Rojas family which controlled the Teyécac hacienda began selling in 1894 or 1895. By 1919, with the end of the Revolution, Teyécac had been completely sold. The owners of Petlachícac began selling land around 1898, and they, like the Rojas family, were most likely gone by the end of the Revolution. Interestingly, however, the lands of the San Benito hacienda were not sold until the mid-1930's. This, coupled with the fact that Nealtican is the only village in the entire region whose lands are not organized into ejidos, or cooperative farms, raises some significant and perplexing questions. One must first ask how the owners of San Benito managed to hold out until 1935 without selling. In addition, is there any relationship between that fact and the absence of ejido lands in Nealtican?

The villagers, as might be expected, differ greatly in their explanations of these two possibly interrelated phenomena. A frequent response is "the people loved the hacendados very much and did not want to take their lands without paying." Another common viewpoint is that "the people wanted to avoid the violence which occurred with the formation of ejidos at nearby villages." Yet a third explanation holds that the people, owing to the high value placed on independence and individual initiative, exercised fortuitous foresight and rejected the temptation to create ejidos.

Each of these explanations is suspect. It is highly unlikely that strong bonds of affection existed between the hacendados and any significant segment of the village population. If the second explanation is accepted, one must accept the unlikely conclusion that Nealtican was the only village in the region which valued peace more than land. The third explanation, that of a strong desire for personal independence, is consistent with present-day conditions and could be a partial explanation. Other nearby villages also share this attitude, however, and opted for ejidos in spite of it. The most plausible explanation is that the owners of San Benito bribed the municipal authorities then in power with free or low-cost land in return for assistance in selling rather than expropriating the land. This explanation is expressed by many of the village's leading citizens, but has not gained wide public acceptance, owing, perhaps, to the fact that many of the municipal authorities under discussion are still alive, and also to the fact that it is universally agreed that, whatever the reason, the action turned out for the best. The significance of the absence of ejidos in Nealtican cannot be overstressed. It has made of Nealtican a tiny island of free enterprise amid a surrounding sea of ejido cooperativism. It strengthened and reinforced at a very critical time the natural peasant tendency of independence of action and thought.

Current Conditions

Land Tenure Patterns

There are four systems of land tenure presently operative in the village (Table 3). The most common form is the pequeña propiedad, or small private holding, which a peasant acquires either as an inheritance from his or his wife's parents, or through purchase of another's lands. All that the peasant produces is his to use as he wishes. This incentive has resulted in the pequeña propiedades being the most productive. Sharecropping (a medias) is not widely practiced since very few farmers have excess land. It requires the worker of the land to give one-half of the produce to the owner of the property. Only the landless or those with very little land are sufficiently destitute to be willing to work under such arrangements. Yet, owing to the increasingly large landless segment of the population, an owner looking for someone to sharecrop his land is frequently besieged with offers, and he who is chosen considers himself fortunate. Because the owner seldom takes much interest in how the land is used, and the sharecropper is too poor to afford fertilizer,

TABLE 3.--PROPORTION OF LAND OPERATED BY TENURIAL SYSTEMS ACCORDING TO RELIGION

	Percentage	
Tenure Classification	Catholic	Non-Catholic
Private Holdings	96	86
Inheritance	72	54
Purchase	24	32
Sharecropping	4	2
Loan Collateral	negligible	12
Rented	negligible	negligible
TOTALS	100	100

Source: Author field survey.

sharecropping usually results in a low harvest and a continuation of the poverty cycle for the landless peasant. In spite of this, sharecropping does offer to an ambitious, capable peasant a means of supporting himself and perhaps saving toward the future purchase of his own land. Rented land (rentado) is less common than sharecropped farms, and differs from the latter in that a preagreed sum is paid the landowner, and the tiller is then free to keep anything else he produces. Often, the rent is paid in kind, such as corn and beans, rather than in cash.

The tenure system which contributes most to poverty and suffering in the village is land given or obtained as collateral for loans (empeño). Whereas the other tenurial forms offer some, if not much, benefit to the poor, the empeño system aids only the wealthy. As is true of all peasant societies, Nealtican has a semisubsistence nonmoney economy. Each of the approximate 700 heads-of-households, with the one exception of the welder Joel Ramos, depends either completely or partially on farming to sustain life. Consequently, land, rather than money, is the basis of wealth in the village. If a villager finds himself in need of a loan, tradition requires that he relinquish a quantity of land proportionate to the value of the loan, to the lender as collateral. This results in the rich, who had enough wealth to extend the loan initially, becoming wealthier, and the poor often falling into complete poverty with the loss of their source of livelihood.

Size of Land Holdings

The size of land holdings in the municipio of Nealtican is regulated by three basic factors: a limited land base, local inheritance customs, and a rapid population increase.

The municipio has an extremely limited land base owing both to its small size (62.5 square kilometers) and to the fact that much of the land, especially in the western portion, is not level enough nor possessed of sufficient topsoil to cultivate. Consequently, almost all land transactions involving the villagers occur within a small, fixed, non-expandable land base.

Local inheritance customs call for all descendants of an individual, both male and female, to be joint heirs, receiving equal amounts of land. Thus, setting aside temporarily the possibility of obtaining additional lands through purchase, sharecropping, renting, or as loan collateral, the size of each peasant's holdings is the direct result of the amount of land originally obtained by his ancestors when the old haciendas were sold, and the number of heirs down through each generation.

Prior to 1940, the poor health and sanitation contributed to a death rate sufficiently high to hold the population of the village to under 2,000. During the past 35 years, however, a sharply declining death rate has combined with the traditionally high birth rate to produce explosive population growth, with the village growing from 2,159 in 1940, to 2,448 in 1950, to 3,054 in 1960, to 4,522 in 1970, and an estimated 7,000 in 1975.[5] The end of this increase is not likely to come soon since exactly 50 percent of the population is under 15 years of age.[6]

Inheritance Customs—Two Examples

Two cases illustrate the effect of equal inheritance customs upon municipio land fragmentation. The first is that of Julio Romero, age 33, who, with 12 hectares, is at present the second largest landowner in the municipio. Julio's great-grandfather obtained over 240 hectares around the turn of the century when the haciendas were sold. In four generations and some 90 years, the original estate will have been reduced to four hectares each for Julio's three children (Figure 8). Julio and his family owe much of the credit for their wealth to having belonged to a family which, since the turn of the century, has not had over four heirs per generation.

The second example, that of Tomás Luna, age 32, is much more representative of the typical villager. His grandmother was able to obtain only five hectares from the old haciendas and had eight living heirs. Thus Tomás received less than one hectare from his father, and Tomás' six young children have no reasonable hope of an inheritance large enough to support a family (Figure 9).

The combination of a small, fixed land base, equal inheritance customs, rapid population growth, and it should be added, a traditional desire and/or expectation of almost all to remain in the village as farmers, has resulted in severe land fragmentation to the extent that, at present, the average peasant owns only 1.2 hectares of land.

Scattered Distribution of Lands

Fragmentation of land in the village is accentuated by its scattered distribution pattern. The peasant usually has one parcel for every half hectare he owns. Thus a man with two hectares commonly has four or five parcels located at random throughout the municipio. This phenomenon is attributable to several factors. First, the land purchased by the ancestors from the haciendas frequently was of mixed quality, including, perhaps, good level tierra negra, some hilly tierra amarilla, and some rocky land upon the slopes to the west. When the original purchasers

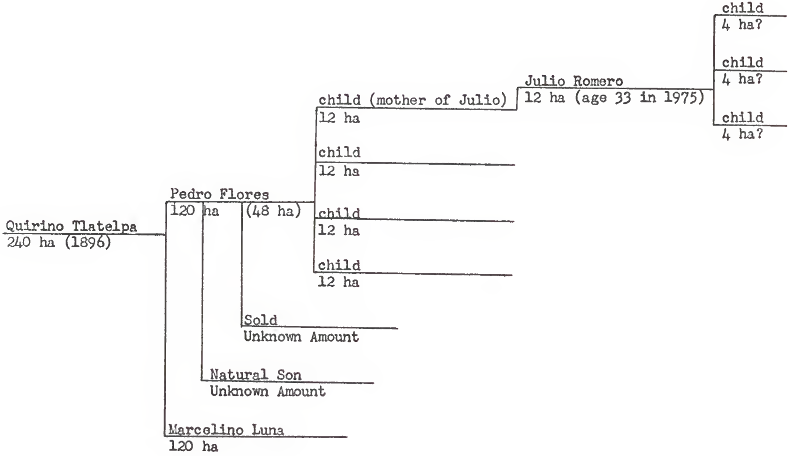

FIGURE 8. GENEALOGY OF WEALTH

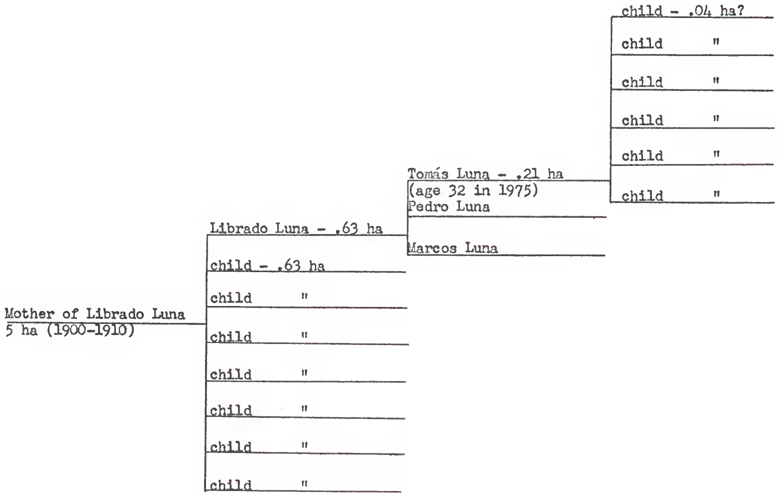

FIGURE 9. GENEALOGY OF POVERTY

passed away, they almost invariably felt obligated not only to distribute equal amounts of land to each child, but also equal amounts of each quality type. Thus, if six children received inheritances, each of the six would be given a parcel of each type of land, resulting ultimately in the land being divided into 18 parcels rather than six, and in the holdings of each heir being dispersed.

In addition, land obtained through purchase, sharecropping, renting, or loan collateral is generally not contiguous to the previously owned land. It is easy to conceived how, over the space of two or three generations, holdings have reached their present highly dispersed pattern.

Owing in part to their deeply ingrained survival mentality created by centuries of struggle to subsist off the land, dispersed land holdings are considered to be an asset by most villagers. Because each parcel varies in fertility and is exposed to slightly different dosages of such natural enemies as hail, frost, gophers and insects, a peasant with several parcels is never likely to lose his entire crop. When the crops of one parcel are lost to a natural disaster, rather than bemoan the increased travel necessitated by fragmented holdings, the peasant expresses gratitude that all of his land was not located in the afflicted area, and that, "Gracias a Dios (Thank God)," he still has enough of a harvest from his other parcels to carry him through the coming winter.

The Agricultural Cycle

In our modern urban, capitalistic society, most people feel that they are operating under intense pressure. The constant rushing and pushing to meet deadlines and to achieve social prestige is often associated with the high incidence of heart and emotional diseases. The typical urbanite looks forward to his annual vacation when he and his family will be able to "get away from it all and relax." Since a large number of vacations are made into rural areas, a vague association exists in the minds of many urbanites between rural farm life and the ever-elusive "simple" life. A logical extension of this myth is the belief that peasants and subsistence farmers lead idyllic uncomplicated lives. This motion was encouraged by the writings of many early geographers and anthropologists, the classic example, perhaps, being the writings of Robert Redfield.[7]

One of the principal purposes of this section is to demonstrate that, at least in Nealtican and by extension in other peasant societies as well, life is extremely complicated and harsh. Complicated because subsistence agriculture is not simple agriculture, and harsh because, idyllic as a setting may seem, life is bitter if one is too poor to feed and nourish his family properly, stay warm in winter, or provide adequate cultural and educational opportunities for his children.

Life in Nealtican is inextricably woven to the agricultural cycle which in turn is based upon the annual moisture cycle (Tables 4 and 5).

The Winter Preparation Season

The agricultural cycle begins in late fall immediately following the harvests of the preceding summer. It is then, from late October to early December, that the soil must be turned over while still moist and pliable from the late summer rains. This plowing is termed the "first preparation" (primera preparación or barbecho). In the case of corn, the dry stalks are cut off at ground level by machete, leaving just the root and lowest 10 or 15 centimeters of the stalk which is turned under

---

TABLE 4.--SEASONALITY AND VALUE OF REQUIRED LABOR FOR ONE-HALF HECTARE OF CORN, NEALTICAN, PUEBLA, 1974-1975

Item	Time of Occurrence	Days' Labor for one person	Value of Labor if done by hired help*
First plowing	Late Oct to early Dec	1	$70.00 pesos
Second plowing	Feb	1	70.00
Make furrows	Mar	1	70.00
Sow seed	Mid-Apr to mid-May	2	60.00
First cultivation	Mid-May to early June		
Plow		1	70.00
Remove earth from plants		1	30.00
Apply chemical fertilizer	June	2	60.00
Second cultivation			
Plow	Late June to early July	1	70.00
Third cultivation			
Weed by hand	Early Aug	3**	90.00
Harvest			
Pick & transport ears to compound	Oct to early Nov	9	270.00
Shell ears	All year	9	270.00
Cut & stack stalks in field	Late Oct to early Dec	3	90.00
Transport stalks from field to compound	Dec to Jan	2	60.00
Dry ears	Dec to Jan	4	120.00
Rent cart for transporting stalks to compound	Dec to Jan	unmeasurable	30.00
TOTAL		40	$1,430.00

* Value figures are based on the 1974-1975 going daily wage of $30.00 pesos for a hired hand, and $70.00 pesos for a hired hand and his team of animals.

** Varies according to specific conditions.

Source: Author field survey.

TABLE 5.--SEASONALITY AND VALUE OF REQUIRED LABOR FOR ONE-HALF HECTARE OF BEANS, NEALTICAN, PUEBLA, 1974-1975

Item	Time of Occurrence	Days' Labor for one person	Value of Labor if done by hired help*
First plowing	Late Oct to early Dec	1	$70.00 pesos
Second plowing	Feb	1	70.00
Apply organic fertilizer	Feb to Mar	3	90.00
Planting	Late Apr to early May		
Plow		1	70.00
Sow seed		2	60.00
First cultivation	Late May to early June		
Plow		1	70.00
Remove earth from plants		1	30.00
First application of insecticide	June	1	60.00
Second cultivation	Late June to early July		
Plow		1	70.00
Remove earth from plants		1	30.00
Second application of insecticide	July	1	60.00
Third cultivation	Early Aug		
Weeding by hand		4**	120.00
Third application of insecticide	Aug	1	60.00
Harvest			
Shell & winnow by hand	Late Sep to mid-Oct	9	270.00
Separate perfect from marred beans	All year	16***	480.00
TOTAL		44	$1,610.00

* Value figures are based on the 1974-1975 going daily wage of $30.00 pesos for a hired hand, and $70.00 pesos for a hired hand and his team of animals.

** Varies according to specific conditions.

*** Varies with size of harvest. Average daily rate is 1/2 costal.

Source: Author field survey.

to rot and build up the organic matter content of the soil. In the case of beans, the vines are generally severed by a sickle at ground level and saved for animal feed, leaving only the roots to decay as organic matter. Other sources of humus include squash vines, leaves of fruit trees, and in most fields, a healthy, late-season crop of weeds which has been left unattacked since the preceding midsummer. Owing to the sandy texture of the soil and the almost complete absence of organic matter, an inherent conflict exists between leaving the weeds to be turned under as green manure, or saving them for animal feed for use throughout the winter drought season. While the peasants recognize the desirability of the former, economic necessity generally dictates the latter course.

After the first preparation, or plowing, of the land is completed, a slack season enters, associated with the cold months of December and January. During this period, agricultural labor is confined to making trips to the fields to bring back enough dry corn stalks, or zacate, to feed the animals for the next few days. A common sight during these days is a man walking alongside a tiny donkey who is supporting a tied bundle of corn stalks as large or larger than its carrier. If, owing to limited land sown in corn the previous year, or to the lateness of the season, the supply of zacate has been exhausted, the peasant must go onto the lower slopes of Popocatepetl to cut wild vegetation such as flowers and grasses (called hierba) to keep the animals alive.

With the arrival of warm spring weather around the first of February, the land is turned over a second time, a process called the second preparation (segunda preparación). The timing of this plowing, like all others, is critical. It must be done immediately following a rain. If it is done before or too late afterwards, the earth will remain in large clods, which will greatly increase the difficulty of the approaching planting. In addition, the wet earth allows the animal-drawn plow to sink further into the soil, thereby achieving a greater mixture of the organic matter and nutrients which have been washed down deep into the soil by the rains. The deep plowing will also prove beneficial to plant root growth during the approaching growing season. Shortly after the second plowing, organic fertilizer composed of chicken droppings will be broadcast in the fields which are to be sown in beans.

Planting of Corn and Squash

If the first and second preparations of the soil have been completed properly, labor associated with the planting process will be minimal. The ground will be loose and friable down to a depth of approximately 20 centimeters. The first crops to be planted are corn and squash which are generally sown in the same field. Prior to planting, the land is plowed for a third time again soon after a rain, this time with a two-sided steel-tipped plow, so that furrows are formed. The farmer next takes a digging instrument, such as a shovel, a long stick, or his big toe, and begins walking down each furrow. At every step, generally a distance of around 80 centimeters, he makes a hole in the loose sand at the bottom of the furrow and, with his free hand, takes three or so seeds from a cloth sack or can suspended from his neck and tosses the seeds into the hole. Immediately thereafter, he withdraws the digging instrument, takes another step forward, and repeats the entire process. Veteran farmers have developed the procedure to a science and achieve such remarkable speeds that they accomplish the entire process while walking at a slow clip down the furrow. The furrows are also about 80 centimeters apart, so that the field, when sprouted, will contain an average of 2.0 to 2.5 corn plants every 80 centimeters, for a total plant population of approximately 31,000 to 39,000 per hectare. Long vines preclude planting the squash as close as the corn. Instead, three or four seeds are planted in the bottom of every fourth or fifth furrow, with three or four meters separating each group of seeds within a furrow.

The depth to which the seeds are planted varies according to the moisture content of the soil at the time of planting. The essential aspect is to have the seeds lying at a depth where there is adequate moisture to sprout. If the soil is relatively wet, this may be only five or six centimeters. If it is quite dry, then depths of ten to twelve centimeters must be used.

The timing of the planting is also critical. If the seeds are sown too early before the arrival of the rains, the moisture available to the young plants will be exhausted and the plants will either be stunted or burned, resulting in a partial or total crop loss. If, on the contrary, the corn is sown too late in the season, it will not have sufficient time to mature and will be subject to frost damage in the fall. Yet another danger of planting too late is that the young plants are more susceptible to damage from the heavy early-summer thunderstorms.

Multicolored Corn

A final hazard of late planting is the preclusion of the opportunity to replant those sections of the field which, owing to the ravages of birds, gophers and other rodents, do not sprout. In this context, it is worthwhile to note the evolution and natural adaptations of corn through the centuries to meet the precise needs of a given locale. In Nealtican, there are four colors of corn kernels: yellow, white, blue, and red (Figure 10). This difference is significant far beyond visual beauty and variety, for each type, or color of corn has a different weight, a different texture and feel to the tongue, a different taste, and most importantly, a different growing period.

Weight is defined as the ratio of kernels to cob within the ear and also the density of the kernels. Thus, an ear which has a relatively small cob and relatively large kernels will weigh more than one which has the reverse characteristics. Similarly, a given number of dense kernels will weigh more than the same number of less dense kernels. The weight of the corn is of utmost importance to the peasant since, all else being equal, the heavier the kernels, the greater the harvest will be. Yellow corn is the heaviest and also takes the longest to mature. It is followed in order by white corn, blue corn and red corn, each lighter and requiring a shorter growing season than the preceding type. It would be logical to assume that yellow corn is most widely preferred. This is not the case, however, owing to a strong dislike on the part of the villagers for its taste. This has resulted in yellow corn's being grown only for animal feed, a luxury out of the reach of all but the wealthiest of the peasants.

The most widely planted corn is white corn, estimated to constitute 90 percent of the village crop. The appropriate time to plant the white corn is around the middle of April, approximately one month before the expected arrival of the rains. This allows a week for the seeds to sprout and some three weeks for the young plants to grow on the residual moisture.

Some two weeks or so after the peasant has sown his field to white corn, and the young plants are six to eight centimeters high, the field will be inspected. If it is found that any of the seeds did not sprout, kernels of blue-colored corn will be sown. The blue, while not as heavy as the white, has a very good taste and, very important, will mature in two weeks less time than the white, meaning that both will be ready to harvest together. After planting the blue corn, the peasant will again wait two weeks and if any of the blue has not sprouted, will sow red-colored kernels as a last resort. The red requires approximately the same time to mature as the blue, but is lighter and has a less desirable taste.

The example of multicolored corn is illustrative of a great truth of Nealtican agriculture which can be summarized "survival first, surplus second." It is much more important to eat poorly than to risk not eating at all, on an outside chance of eating well.

Planting of Beans

After the corn and squash are planted, sprouted, and growing well, the farmer turns his attention to his bean crop, which is always the bush variety. The timing of the bean planting is just as important as that of the corn and squash, with late April to early May being best. Rather than making furrows, the land planted to beans is merely turned over a third time and planted simultaneously. This requires that at least two workers be present, one to plow and the other to plant. The plowing is commenced in the center of the field, using only a one-sided steel plow. The sower walks along behind the plow, dropping two or three seeds at 70 to 80 centimeter intervals. The seeds are left

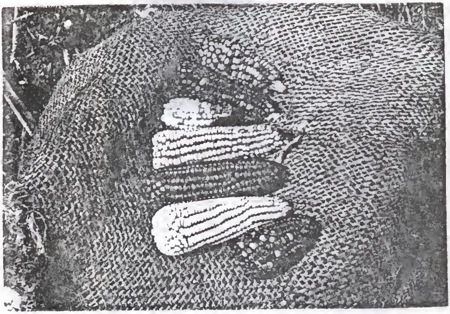

FIGURE 10. COLORS OF CORN. From top to bottom are variegated, blue, variegated, yellow, red, white, blue.

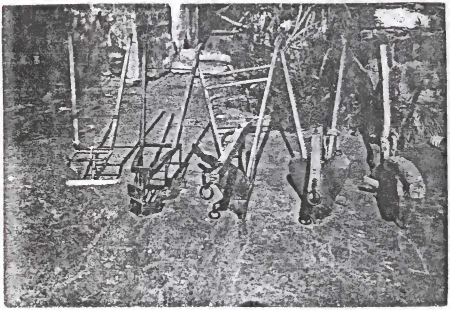

FIGURE 11. FOUR TYPES OF PLOWS. From left to right are two types of escaladoras, single-sided steel plow, two-sided steel plow, wooden-tip plow.

temporarily uncovered. On the next pass of the plow, the seeded strip is then covered by the adjacent soil turned by the plow. The entire field is planted in this manner with a relatively level field the final result. If the beans are planted at the proper time, the plants will just be sprouting when the summer rains arrive. If they are planted too early, however, or if the rains are late, the crop will be lost because the young bean plants, unlike corn, cannot withstand extended periods of growth without water. Conversely, if planted too late, the plants face all the dangers enumerated previously for late corn plantings.

Like corn, there is a survival safety valve for the farmer in case part or all of the beans do not sprout. In such instances, peas will often be planted as a substitute owing to the fact that they can withstand the colder temperatures of autumn and can thus provide a late crop when beans could not. Peas are not widely sown, however, because they are not, for historical and cultural reasons, a part of the normal diet.

The Summer Cultivation

After the corn is four or five weeks old, and the plants have reached about one-half meter in height, the field must be weeded. This is usually accomplished during the last half of May and is done with the old pointed-stick plow which is not so wide as to disturb the corn roots (Figure 11). The weeding, called the first cultivation (primera cultivación), must follow a rain so that the plow can turn as much soil as possible. It is essential that it be accomplished at this stage of the corn's development, for if it is postponed, the weeds will gain too much of an advantage and the harvest be reduced. Rather than running the tip of the plow along the bottom of the furrow next to the plants, the plow is deliberately placed on the elevated soil between the furrows. The result is that the high earth is pushed to either side, into the low furrows, thereby resulting in a level field. The ten to twelve centimeters of earth which is heaped around the plants provides support for the plants against the winds. This is important since properly fertilized plants are very tall when mature, with heights between three and four meters being typical. The danger of wind damage is also the reason why beans are not grown in the same field with corn.

A second weeding of the corn, called the second cultivation, follows approximately one month after the first, sometime during the latter part of June, and again immediately following a rain. By that time, the plants are waist high, and a good growth of weeds is again present. The wooden-tip plow is again used and run directly between the rows of plants, pushing more soil up around the stalks. Because the soil was level after the first cultivation, the second cultivation results in the formation of new furrows, with the important difference that the corn plants are now in the high ground between the furrows. This ingenious system enables the farmer to both weed and reinforce the support of the plant twice during the growing season. After this, the plants quickly grow to heights where plowing would cause considerable damage, and therefore, no further plow weedings are undertaken. It will be noted that one drawback to this system of cultivation is that, up through the end of June or early July, only the weeds farthest away from the plants have been attacked. Nothing has been done to remove the weeds growing next to the stalks of corn. This almost always necessitates a third weeding, this time by hand, sometime during the first half of August. As always, it is carried out following a rain. The peasant takes his sickle and goes through cutting off at the base the largest weeds. While this is unquestionably valuable, it also leaves the roots of the large weeds and most of the smaller weeds free to continue to sap the valuable nutrients needed by the corn.

The only remaining pre-harvest labor associated with corn is fertilizing. In Nealtican a piece of land will usually be rotated between beans one year and corn the next. At present, the preferred practice is to apply chicken manure (abono de granja) before the second preparation the year the land is sown to beans. The following year, when sown to corn and squash, small amounts of chemical fertilizer are applied directly around the plants themselves. For the corn, this is done only once, usually between the first and second cultivations. Squash requires two applications, once at the start and another at the middle of the growth cycle.

It will be recalled that after the bean field is planted, it is level, lacking any furrows. This is a conscious decision, since if the beans were planted in furrows, they would have to be cultivated by plow, which would cover up many of the vines and pods. Furrows also result in greater erosion and soil loss in early summer before the bean roots are fully developed. The situation thus requires a different type of cultivating instrument. That which has been devised and is in wide use is called a ladder, or escaladora (Figure 11). It is so named because its basic characteristic is a flat, sharpened cross bar, or rung, which is slanted downward, and when pulled by an animal, cuts a swath approximately 50 centimeters wide and some 10 centimeters underneath the surface of the soil. The escaladora can thus be run down between the clusters of bean plants, separating the weeds from their roots without ever heaping soil onto the growing vines. The beans are weeded in this fashion twice during the growing season, first when the plants are 20 to 25 days old in late May or early June, and the second a month after the first. As with corn, a third weeding by hand is carried out during the first part of August.

An interesting characteristic of the local native, or criollo, corn is its resistance to worms. It is extremely rare for an ear to be found with a worm. Consequently, the peasant need not worry about applying insecticide to the corn. Some 20 to 25 years ago, it could also be said that the beans had no insect enemies. Since then, however, the municipio bean crop has experienced a mounting problem with insect pests. This necessitates the application of insecticide at approximately two- to three-week intervals from June through August.

The Harvest

If the timetable has been adhered to properly, the corn, beans, and squash will all be mature, or nearly so, by the beginning of September. As the rains gradually decrease in frequency during September and October, the plants are left to dry. It is essential that the beans and corn be completely dried and hard and that the shell of the squash be as hard as possible or spoilage may occur in the stored food during the ensuing year.

In contrast to the other aspects of the agricultural cycle in which the peasant generally works alone, harvesting of both beans and corn is customarily done in cooperative work parties, called faenas or ayudas (Figure 12). The owner of the land will arrange with several other men, generally members of his extended family, to assist him in the harvest, on the promise that he will reciprocate the favor. The group will gather

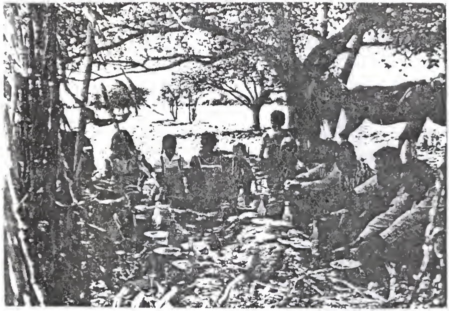

FIGURE 12. MEAL BREAK DURING AN AYUDA

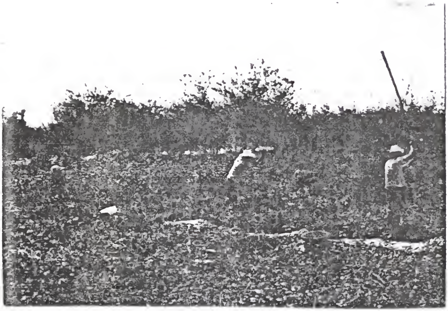

FIGURE 13. BEATING BEANS WITH STICKS

at the compound of the sponsor, and in a jovial mood proceed together to the field. Following the morning's work, the wife of the sponsor will serve a free meal to all involved, including the special treat of soda pop or beer. The work will then continue until nightfall.

By the end of September, the beans are thoroughly dry and harvest arrangements are made. The most frequent method of harvesting beans is for some workers to cut the plants at the ground level. Other workers follow behind and gather up the plants with all the dry pods still on the vines, and carry them over to where a large tarp or canvas has been spread. The plants are placed on the canvas and beat repeatedly with long sticks (Figure 13). The pounding separates the beans from the pods and plants. The beans and chaff are then winnowed (Figure 14), and the beans poured into large gunny sacks for transport by animal back to the compound.

The corn is harvested after the beans, sometime in October or early November. A needle, called a pizcalón some 18 centimeters long, is used to rip a cut through the outer husks of the ear. Those husks are pulled back and the ear then plucked, sometimes with the inner husks left on to be used for tamales, other times with all the husks stripped. The ears are dropped into a cloth which is slung around the shoulders and which is emptied into the costales when full (Figure 15).

After the harvest, three tasks remain before the annual agricultural cycle is complete. The ears of corn must be dried in the patio of the compound and, as needed through the next year, shelled for soaking prior to being ground into masa. Secondly, the dry corn stalks must be cut and stacked in tepee-shaped mounds, called montones, to await transport to the compound during the coming winter to be used for animal feed or other

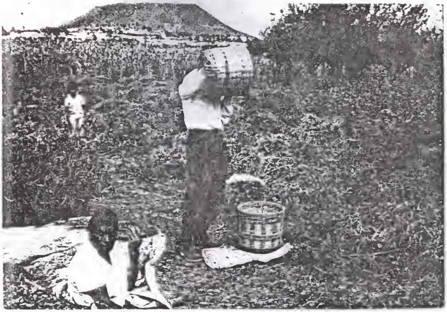

FIGURE 14. WINNOWING BEANS

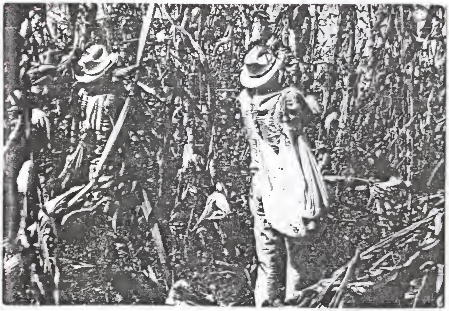

FIGURE 15. HARVESTING CORN

purposes. Lastly, the beans must be sorted, separating the perfect from the blemished. The proportion of perfect to marred beans varies from year to year, but often a fourth to a half are blemished. This is children's and women's work to be done when necessary during the coming winter.

Crops and Their Uses

In an environment, such as Nealtican's, in which resources are inadequate, little is wasted. Necessity dictates the use of corn and beans, the principal crops, in an astonishing number of ways, many of which would be unthought of in affluent, industrial societies.

Nealtican could accurately be described as a "corn culture," owing to the dominant role of the plant in the society. The primary use of the plant is for food. The kernels are ground, after soaking in lime water, into a coarse sticky dough called _masa_, from which tortillas, the basis of every meal, are formed. In addition to _masa_, the ground kernels are occasionally added as a thickener to sweet boiling water or milk producing a drink known as _atole_. The inner husks of the ear, next to the kernels, are used as a wrapping substance in cooking. Steamed _masa_ and meat or vegetables enclosed by the inner shucks forms _tamales_, which like _atole_ is a special treat and consumed principally on holidays. Corn is never eaten on the cob as a vegetable, and for a good reason; the practice is considered wasteful because the kernels are not full-sized, and vegetables are not as essential as tortillas.

In addition to being the main staple of the human diet, the corn plant is also a major part of the diet of domesticated animals. The dried stalks, called _zacate_, comprise the chief winter food of all domesticated animals, including horses, mules, donkeys, cattle, swine, poultry, and rabbits. If an animal is fortunate enough to have a wealthy owner, he is likely to be fed corn kernels in lieu of other grains such as oats. The stalks are sometimes allowed to ferment to be fed to the animals as silage. Occasionally, an early season crop of corn will be sown on a small garden plot within the village where irrigation water is available. In such cases, six to eight seeds are planted every 35 centimeters and harvested in mid-May as green fodder for the animals.

Corn also has a wide range of nonfood uses. Chief among these is its value as a cheap, albeit extremely low quality, construction material. Many of the poorest villagers use the stalks to wall or roof their shacks, "weatherproofing" them with newspaper or old tarpaper. It is even more common to see fences constructed from the stalks. Other uses of the corn plant include interior house decorations, a range of toys as wide as the imagination of children; also the stalks are allowed to decompose for return to the land as fertilizer, and the ends of cobs are used as plugs for bottles and drainage pipes.

Although not suitable to as many uses as corn, the bean plant is also an integral part of the Nealtican culture. The beans are produced in a great variety of sizes and colors, but unlike corn, color is not related to the density of the seed or the length of the growing season (Figure 16). Beans are almost always prepared by boiling. Boiled beans, tortillas, green chilies, and salt form the entire menu of perhaps 95 percent of the meals. The people enjoy greasy food and would eat fried beans more often but cannot afford the grease or fat. After the harvest, the plant is either left in the ground and subsequently turned under as organic matter, or if insufficient cornstalks are available, brought to the compound and used as animal feed.

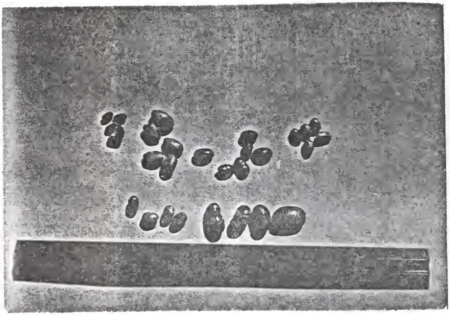

FIGURE 16. COLOR AND SIZE OF BEANS. Colors top row left to right are black, light brown, red, light brown; bottom row left to right are grey with black specks, brown, dark blue with white specks, dark red with light red spots, purple.

In addition to corn and beans, numerous secondary crops are utilized by the villagers. Foremost among these are squash and the maguey cactus. Squash is cultivated in the same fields as corn. Two varieties dominate: a hard-shelled, thick-fleshed winter squash called calabaza, and a large round gourd called chilacallote (Cucurbita lagenaria). The calabaza resembles pumpkin in every particular with the exception that the shell remains green when ripe, rather than turning orange. The inner flesh is dark orange and boiled as a vegetable. The principal use of both the calabaza and the chilacallote, however, is animal feed. Horses, in particular, are very fond of both. The chilacallote is not consciously cultivated by the villagers, but thrives as a volunteer, extending its long vines up and around trees, walls, and rock piles. The only use of its flesh is animal food. Both varieties of squash are valued for their seeds which are soaked in salt water, dried, and eaten much the way American children eat sunflower seeds and peanuts.

The maguey cactus, a variety of the agave plant, is valued principally for its sap which forms the basis of three drinks. If the juice is drunk before fermenting, it has a sweet flavor and is called agua de miel (honey water). Most often, however, the juice is fermented and then consumed as a liquor known as pulque. Very few of the villagers can ever afford the luxury of drinking the distilled liquor called tequila. The leaves of the plant also provide thread fibers, the flesh can be eaten in times of hunger, and the thorns are used as needles. During the hacienda era, great amounts of land were sown to maguey. With the post-World War II population boom, however, the maguey has given way to food crops. At present, the cactus is planted mainly as a windbreak or boundary marker between fields of corn and beans, and along the sides of dusty roads.

Other plants which grow voluntarily and are used by the villagers include a vine called chayote (La. scisyos edulis) which produces a pear-sized green vegetable called espinosa or "spiny" because of its spines; the prickly pear cactus whose pomegranate-like fruits, called tunas, are relished as a delicacy and whose leaves are eaten as a green vegetable; wild grasses, flowers, and cultivated barley, which are used to supplement animal feed; and the colorín tree, whose red flower petals are eaten as a vegetable, especially with eggs. It goes without saying that no piece of wood, however small, is ever wasted.

A recent land-use change has been the introduction of fruit trees, which have been substituted in many cases for the maguey cactus. Almost all the deciduous, hard fruits are grown, including apricots, peaches, apples, pears, and most importantly, crab apples. The avocado is also widely cultivated. The trees are planted in rows six or seven meters apart within the fields used alternately for corn and beans. At present, only the crab apples and the avocados are sufficiently disease-free to yield good harvests. In former times, great quantities of apricots, peaches, and apples were exported to Mexico City and Puebla, but the last 15 years have witnessed steadily decreasing yields. This is attributable to a variety of factors, most of which can be traced to poor care by the peasant, including failure to prune, graft, fertilize, water, or spray for insects and diseases. In addition, many of the local varieties require a longer cold season than Nealtican's. Yet another obstacle is the overlap between the growing season of the fruit and the dry season. Most bloom in February, in the midst of the dry season, and much or part of the growth of the fruit is stunted by drought. The apricots are the hardest hit in this respect, with the harvest occuring in April and May before the rains come. The peasants consider these problems too numerous and too complex to surmount and the mere mention of the fruit trees often prompts expressions of pessimism and despair. At present, the principal product of most of the peach, apple, and pear trees is wood.

Animals

The villagers are animal poor. The cheapest beast of burden is the donkey which is usually found in households that cannot afford horses or mules. A well-equipped farmer will have either a team of horses or a team of mules. The latter are stronger, but also cost twice as much. Many families have only one horse or mule. Cattle are never used as draft animals, and their presence in the village is limited to a couple dozen milk cows, whose products are sold to outside merchants, and only rarely consumed by the villagers. Sheep and goats are also uncommon since they cannot work and the land can barely support contributing members of society. For this same reason, pigs are not as common as the villagers would like. Pork is consumed only on fiesta days. The inability of the people to raise chickens produces depression matched only by the annual failure of the fruit trees. The birds are susceptible to disease, especially during the cold winter, and few ever grow to maturity. Eggs are consequently a luxury, as are all forms of meat and dairy products.

Plows

The complexity of the village agriculture is exemplified by the variety of plows. Rather than using just one, a properly-equipped farmer must have four (Figure 11). For turning the soil during the winter and for planting beans, a single-sided steel plow is needed. For planting corn, however, a double-sided plow is required because furrows must be made. The double-sided steel plow is too wide to cultivate the corn, however, so the old wooden-tipped plow is used. Lastly, the escaladora is necessary for the cultivation of the bean field.

Land and Wealth

Subsisting on One Hectare

In Nealtican, the ability to generate wealth is directly proportional to the amount of land owned. After a peasant is reduced to the village average of one hectare in holdings, he is faced with the challenge of supporting himself and his family on the combined yields of one-half hectare of corn and one-half hectare of beans each year. In a good year, the average yield of the corn crop is barely adequate to feed a typical family, while one-third of the crop of beans is sufficient for the family needs, leaving the remaining two-thirds to be sold for cash (Tables 6 and 7). An average family, then, has only 32 kilos of corn and 530 kilos of beans available for sale after feeding itself. The net value of these products, after deducting production expenses, in 1974-1975, amounted to $1,698.00 Mexican pesos, or U. S. $135.80 (Table 8).

The peasant must endeavor to stretch this meager amount to cover his family's cash expenses throughout the entire year. These include medical and dental care, medications, taxes, education, clothing, transportation, nonsubsistence food items, home furnishings and appliances, recreation, and farm animals and implements. This must be accomplished in a national economy which, according to most informed observers, has averaged over 30 percent inflation annually for the past three years, and which has resulted in prices for many items the peasant requires, such as land and farm animals and equipment, being comparable to those of the United States (Table 9).

TABLE 6.--AVERAGE CORN AND BEAN PRODUCTION, NEALTICAN, MEXICO

1/2 hectare corn	1/2 hectare beans
35 *costales* of unshelled corn, or	8 *costales* of dry shelled beans @ 100 kilos/*costal*, or
18 *costales* of shelled corn @ 100 kilos/*costal*, or	800 kilos beans
1800 kilos shelled corn	

Source: Author field survey.

TABLE 7.--AVERAGE ANNUAL CONSUMPTION OF FAMILY OF 4 ADULTS, NEALTICAN, MEXICO

Corn	Beans
8.5 kilos/adult/week, or	1.3 kilos/adult/week, or
34.0 kilos/family of 4 adults/ week, or	5.2 kilos/family of 4 adults/ week, or
1,768.0 kilos/family of 4 adults/ year	270.4 kilos/family of 4 adults/ year

Source: Author field survey.

TABLE 8.--AVERAGE ANNUAL FARM BUDGET, NEALTICAN, MEXICO

Item	Corn	Beans
Production per 1/2 hectare	1,800 kilos	800 kilos
Consumption of family of 4 adults	-1,768 kilos	-270 kilos
Salable surplus	32 kilos	530 kilos
Value of salable surplus (corn @ $1.50/kilo and beans @ $7.50/kilo*)	$ 48.00	$3,975.00
Expenses for fertilizer, seed, insecticide, taxes, etc., excluding personal labor	- 335.00	-1,990.00
Net profit excluding personal labor	$- 287.00	$1,985.00
Combined net profit	$1,698.00	

*All amounts in Mexican pesos.

Source: Author field survey.

TABLE 9.--1974-1975 FARM COMMODITY PRICES, NEALTICAN, MEXICO

Item	Cost in Pesos	Dollar Equivalent
1 well, 80 meter depth, 20 cm diameter	$300,000	$24,000
1/2 hectare of good, potentially irrigable land	60,000	4,800
1/2 hectare of poor farming land	15,000	1,200
1 new animal-drawn cart	5,000	400
2-sided steel plow	700	56
1-sided steel plow	500	40
wooden plow	200	16
bean cultivator	200	16
team of 2 good horses	4,000	320
team of 2 good mules	8,000	640
1 good donkey	700	56

Source: Author field survey.

Naturally, the money is generally spent in paying for such felt necessities as medical care and drugs, taxes, and frequently, beer and pulque. Even in a good year, little or none remains to purchase animals, a cart, or plows, all of which are necessary in working the land, and which must be obtained either through purchase, rent, or free loan.

Seasonal Unemployment

Land scarcity in Nealtican has resulted in high seasonal unemployment. One-half hectare of corn requires an average of 40 days' annual labor (Table 4). A comparable-sized plot of beans requires 44 days' annual labor, part of which (separating the perfect from the marred beans) is traditionally performed by the farmer's wife or children (Table 5). Consequently, the average peasant has secure employment for no more than 84 days each year, leaving him unemployed and potentially unproductive the remaining 73 percent of the year (Table 10).

The enterprising peasants naturally seek second jobs but these are extremely scarce. There is little or no demand for blue-collar jobs such as factory workers, mechanics, bus drivers, electricians, plumbers, or construction workers. Those jobs are urban-oriented and are available only in the distant cities of Cholula, Puebla, Atlisco, San Martín, and Mexico City. While it is theoretically possible to live in Nealtican and commute daily to all but the latter, two factors weigh against such action. The first is the time and expense involved in travel, and the second is the difficulty of obtaining urban employment on a seasonal basis only. Consequently, those who decide to seek an urban-related job almost invariably move to the city, where they soon acquire attitudes and consumption habits incompatible with those of their former village. At

TABLE 10.--SEASONAL UNEMPLOYMENT, NEALTICAN, MEXICO

Work days available at 6 days per week	312 days
Annual labor required to work 1/2 hectare of corn	40 days
Annual labor required to work 1/2 hectare of beans	44 days
Total annual labor for 1 hectare	84 days
Unemployed or free to work elsewhere	228 days

Source: Author field survey.

present only one Nealtican peasant commutes to an urban job (in a Cholula factory), and he has been forced to give up most of his farming.

Those seeking a secondary source of income are thus compelled to search within the Nealtican environment. The peasant's preference is to work as a hired farm laborer, or jornalero, on another's land. Such labor earns $30.00 pesos a day. Unfortunately, the available peasants far outnumber the demand for their services. Most villagers are thus forced to turn to the volcano Popocatépetl, where they labor, usually for a daily return of less than $25.00 pesos as wood cutters, charcoal makers, or stone masons. Those individuals who desire to work but are not willing to travel to work in the mountain, or monte, tend to enter commerce at a microscale. A corner of the family compound will be set aside as a "store" where minute quantities of staples, sweets, and beverages are sold. The daily profit from these stores varies from a few centavos to 20 or 30 pesos. Small as it is, there is an even lower level of commerce. This is the traveling vendor, who will, for example, buy 200 rolls and pieces of sweet bread and then go door-to-door selling each for a 10-centavo markup. Even the traveling merchant may subcontract part of his produce to others, perhaps young boys, who will sell just enough to buy some candy or other treat.

Approximately half the farmers are either disinclined or incapable of obtaining a second job. Faced with months of idleness, they frequently succumb to the lure of alcohol. Knowledgeable villagers estimate that 20 percent of the adult males are alcoholics, which fact has widespread social and economic repercussions throughout the village.

Conclusions

Life for the Nealtican villagers is neither easy nor idyllic. Rather it is a continual struggle against the byproducts of poverty: malnutrition, disease, inadequate clothing and housing, and despair. Subsistence agriculture is not simple. Successful agriculture in Nealtican requires a thorough knowledge of the moisture cycle, soil conditions, plant attributes, equipment needs and natural enemies. It is easy to understand why, in Nealtican and elsewhere, many demonstrations of so-called "modern" agricultural techniques have failed. These failures are particularly regrettable in light of the fact that there are, as will be discussed in Chapter Nine, numerous areas of improvement of agriculture in Nealtican, while working within the overall framework which has proven successful in sustaining life for hundreds of years. Knowledge of a single failure, however, often prejudices the peasant's mind against additional, what perhaps could turn out to be highly beneficial, efforts at innovation.

Notes

[1] Translation of "*el lugar donde se baña*."

[2] Microfilm Roll Number 35566, *Libro de Bautismos, 1625-1643*, Parroquia de San Juan Tianguismanalco, Puebla. Microfilmed record available at the Sociedad Genealógica, S. C., at Cerro de Jesús #75, México, D. F., México.

[3] Microfilm Roll Number 35576, *Libro de Informaciones y Casamientos de los naturales delPueblo de San Juan Tianguismanalco, San Balthasar, San Buenaventura y los de mas . . .* . Microfilmed record available at the Sociedad Genealógica, S. C., at Cerro de Jesús #75, México, D. F., México.

[4] Item 21, archive of the Catholic Church, San Buenaventura Nealtican, Puebla, Mexico.

[5] México, Dirección General de Estadística, "*Sexto Censo de Población, 1940*," Puebla, p. 190; "*Séptimo Censo General de Población, 1950*," Estado de Puebla, p. 143; "*Octavo Censo General de Población, 1960*," Estado de Puebla, tomo 1, p. 24; "*Noveno Censo General de Población, 1970*," Estado de Puebla, tomo 22, p. 233.

[6] México, Dirección General de Estadística, "*Noveno Censo General de Población, 1970*," Estado de Puebla, tomo 22, p. 32.

[7] Redfield, *The Primitive World and Its Transformations*.

CHAPTER SIX

THE CONVERSION PROCESS—DIFFUSION OF RELIGION AT THE INDIVIDUAL LEVEL

Social Determinants of Conversion

Studies of peasant conversion to new religions have shown that the existence of, and membership in, community power factions or social subgroups is an important determinant of conversion. Robert Redfield, for example, in his followup study of Chan Kom, Yucatan, noted that the temporary conversion to Protestantism of most of the villagers resulted from a clan "division that had long existed and which soon accentuated it."[1] This chapter will analyze the impact, or lack of impact, on conversion of the following factors: occupation, economic incentive, lineage, location of residence, political affiliation, age, and trauma.

Occupation

Membership in occupational subgroups is not a factor in the conversion process because all villagers are farmers.

Economic Incentive

There is no evidence which indicates that Protestant converts comprise a subgroup of Catholics seeking to free themselves from perceived onerous economic obligations to the mother church. In a random sample of 41 percent of the non-Catholic peasants, only 22 percent cited experiences of an economic nature as a factor preceding conversion.

For a few individuals, this meant avoidance of the cargo system and such costly events as weddings. However, as will be shown in Chapter Eight, participating Catholics in Nealtican are a small minority, and a Catholic who considers his religious expenses to be too heavy can, with no social criticism, discontinue his participation in Catholic events and join the majority of his faith who retain membership in the church while expending only $10.00 pesos annually for religious purposes. Such a course is considerably more economical than becoming a Protestant, the majority of whom spend a much greater share of their income on religious activities than do their Catholic counterparts.

A superficial glance at certain benefits offered by the Protestant bodies only to their membership might indicate that some of these secondary factors are important economic attractions. The Latter-day Saints, for example, operate a highly respected, tuition-free grade school in Puebla for children of L.D.S. parents. Surprisingly, however, the school is not attractive to the majority of the Nealtican members. The two most frequently voiced criticisms of the school are its monthly $30.00 pesos per child transportation charge, and the long hours the young children are required to be away from home. The bus leaves Nealtican at 6:00 A.M., and does not return to the village until 4:30 P.M. Owing to these disadvantages, enrollment of Nealtican Mormon youth at the school has dropped from an original 30 in the 1960's to 15, or 21 percent, of the 70 eligible children in 1974-1975.

An additional apparent economic advantage of Protestant membership which does not materialize in real life is the Latter-day Saint welfare plan. If the plan were operating as designed, it would constitute a type of economic insurance policy which would provide material assistance, in the form of food, clothing, or medical care, in time of need. In reality, however, it has not functioned this way in the village.

Half-hectare "welfare farms" are operated cooperatively by each ward. Contrary to the name, however, the profits from these projects have been budgeted for various local and regional operating expenses, and have not been used for welfare purposes. Of all the money contributed by the members to the church, usually 80 to 100 percent is designated as tithing. These tithing funds are sent out of the village each Monday and eventually end up in Mexico City or Salt Lake City where they are apportioned for general operating expenses of the church. None of the tithing money remains in Nealtican or Puebla, and none is spent on direct aid to church members. The remaining money contributed by Nealtican Mormons is assigned by the donor to either the building fund, the budget fund, or the fast offering fund. Building fund monies are used solely for the construction and maintenance of the chapel. Budget funds are restricted to supplies and operating expenses. Only the fast offerings, which is the amount of food money saved by church members during a monthly two-meal fast, are available to local church officials to aid the poor. The small amount donated to this fund greatly restricts the amount of assistance that can be rendered. Although additional fast offering money can be obtained from further up the organizational ladder, the process is not frequently initiated.

Thus, in practice, only 2 percent of the members have ever received L.D.S. welfare aid. Chapter Ten will discuss other L.D.S. extension efforts in the village. Suffice it to say at this time that none of these has resulted in direct economic aid to the members. Furthermore, it must be remembered that the Pentecostal and splinter-Mormons contribute only tithing, all of which is sent outside the village and is never spent on the material well-being of the members.

Rather than direct economic aid, the economic factors referred to by the Protestant converts are of two general types: negative economic experiences with Catholic associates, and/or positive economic experiences with Protestant acquaintances. The negative experiences include being taken advantage of by a Catholic neighbor or the refusal of such a neighbor to assist in a time of need. On the other hand, most of the experiences of the villagers with Protestantism are economically positive. They note that a friend, perhaps, has been able to overcome his expensive and family-destroying illness of alcoholism through Protestant efforts. They also note that the Mormon members receive training in money-saving arts such as home food preservation and storage, sewing, nursing, and accounting. These indirect benefits are the factors which constitute the "economic" attraction of Protestantism in the minds of the villagers. This is nowhere more evident than in the courtship patterns of the village youth. Eligible Protestant youth are highly prized by their Catholic counterparts who see in them those qualities which will contribute to a happy home life. Consequently, many Catholic-Protestant marriages occur, which is a source of concern to the Mormons, in particular, who stress very strongly the importance of intrafaith unions. However, most of the Catholics who marry Protestants are soon converted, and unknowingly come to constitute an important subgroup of Protestant converts.

Lineage

The most common paternal surname in the village is Luna, which binds 17 percent of the inhabitants. Other paternal surnames which occur in at least 3 percent of the population are, in order of frequency: Castillo, Santamaría, Pérez, Grande, Méndez, Castro, Chico, Romero, Osorio, Ramírez, and Soriano. Together, 73 percent of the villagers claim these names.

There are no lineages which dominate in the village and vie for power. Neither have any of the great families used Protestantism as a vehicle for achieving influence at the expense of competing families. On the contrary, there is a remarkable uniformity between the family composition of the entire village, the Protestant sector, and the Catholic sector (Table 11). With the exception of the Lunas, who have a greater number of Protestants, and the Romeros, who have a fewer number of Protestants, none of the 12 leading families vary more than 3 percentage points in their composition within the combined, non-Catholic, and Catholic sectors. Furthermore, it is not uncommon to find siblings or cousins who hold opposing religious preferences. Within the Luna lineage, for example, there are three Catholics to every Protestant. It is evident that family membership is not a significant social determinant of conversion.

Location of Residence

There does not appear to be any significant intravillage relationship between location of residence and Protestant affiliation (Figure 17). This fact is clearly related to the tendency of the young couples to establish residence, when possible, close to the compound of one of the parents. The principal determinant of residence location is lineage membership, and because Protestantism has attracted adherents from all the major families, Protestant residences are scattered in a seemingly random pattern throughout the village.

TABLE 11.—SURNAME OCCURRENCE BY RELIGIOUS AFFILIATION

	Percent		
Surname	All Religions	Non-Catholic	Catholic
Luna	17	28	14
Castillo	11	10	11
Santamaría	8	6	8
Pérez	7	4	7
Grande	5	4	5
Méndez	4	6	4
Castro	4	5	4
Chico	4	2	4
Romero	4	0	4
Osorio	3	5	2
Ramírez	3	1	3
Soriano	3	1	3
All others	27	38	31
TOTALS	100	100	100

Source: Author field data and local census records.

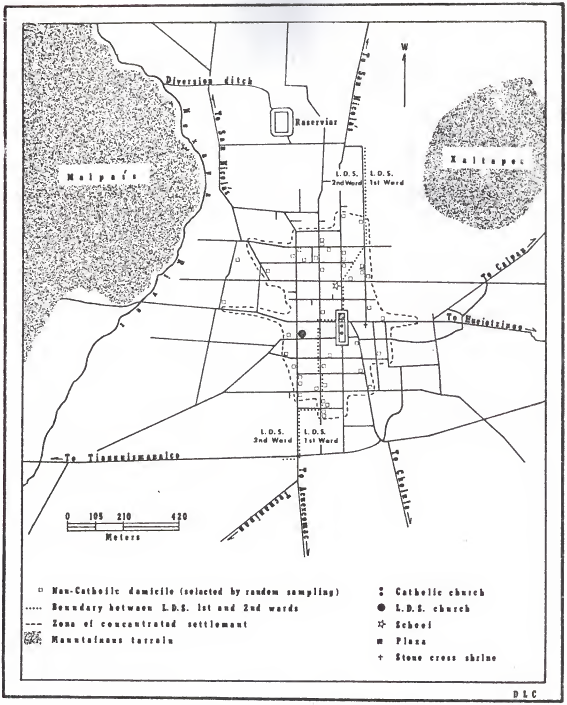

FIGURE 17. VILLAGE OF NEALTICAN

Political Affiliation

Politics has historically constituted the most divisive force in the village. The municipio, like almost all others in Mexico, is controlled politically by the PRI (Institutionalized Revolutionary Party) which has ruled the nation since the Revolution. Owing to the single-party dominance, special interest groups labor for the adoption of their viewpoints as political subunits.

The history of politics in 20th-century Nealtican is the account of the struggle for power between two subgroups: the CNC (National Farmer Confederation) and the CROM (National Labor Confederation). Nationally, the CNC is the voice of the small farmer, or campesino, and the CROM is the organ of organized labor. One might logically suspect that Nealtican's villagers would be overwhelmingly pro-CNC. Owing to the traditionally strong political ties of the village to Atlisco, however, approximately half the villagers belong to the CROM which dominates Atlisco politics from its control of the textile mills.

Political affiliation has not been a social determinant of Protestant conversion in the village. On the contrary, during the past decade, the Mormon church has experienced serious internal conflict between members of the two opposing political factions who endeavored to use their church membership to further their political beliefs. The infighting was never great enough to cause the formation of splinter groups, but did damage many formerly close friendships and cause some members to reduce activity in the church. The problem was overcome in 1973 when an understanding was reached within the L.D.S. community that the church would remain apolitical. This understanding was tested in 1975 when the CROM leaders in Atlisco, basing their logic on the large L.D.S. membership in Nealtican, suggested that the Mormons run their own candidate for municipio president against those of the CROM and CNC. The Mormon leadership wisely rejected the proposal which, if followed, could have easily had the effect of polarizing the village into two politically-based religious groups, with the Latter-day Saints constituting the weaker and smaller of the two.

While Mormonism has attracted converts from all political persuasions, all the splinter-Mormons and Pentecostals belong to the CNC. This is attributable, in the case of the Pentecostals, to the fact that their founder and present leader, Benito Grande, fled the village as a political refugee from what he perceived as persecution from the CROM, which exercised the right of eminent domain to obtain land, which had belonged to Grande's grandmother, for the site of the new school. Consequently, Grande is strongly pro-CNC, and the Pentecostal group, in the Latin American caudillo, or strong man, tradition, is also pro-CNC.

Similarly, the splinter-Mormon caudillo, Marcelino Osorio Castillo, has always held CNC membership, and has prevailed upon his followers to do likewise, in an effort to exercise as much political clout as possible. The jealousy and the bitterness felt by the splinter-Mormons toward members of the mother church has led them to seek CNC sanctions against their former associates. These efforts have consistently failed, however, owing to the large numbers of regular Mormons who are active within the CNC.

Age

Protestantism appeals more to the youth of the village than to any other societal subgroup. Of the 29 Protestants interviewed who were not born in their current faith, all but 7, or 76 percent, began active investigation of their new religion before the age of 30, the average age being 26.5 years. The average length of prebaptismal investigation is 3.1 years, and the average age at baptism is 29.6 years. In addition, most of the older converts are converted through the proselyting efforts of younger sons, daughters, nieces, or nephews.

The attraction of Protestantism to the youth can be attributed to three factors. Firstly, Protestantism appeals most to individuals who have severed, either partially or completely, their ties with the past. Such persons, while not necessarily actively seeking new beliefs and values, are at least willing to listen to foreign ideology. They have no vested interest in maintaining the status quo. Secondly, the youth are the most interested in being "modern," and the villagers universally perceive the United States to be more modern and progressive than Mexico. Lastly, the Mormon church offers a full youth program, including basketball and other sports, dancing, outings, drama and music. These are carried out within a regional framework, and numerous trips are made to Puebla and other nearby villages to compete against other church units, or to hold conferences. Furthermore, it is only within the Mormon church that a Nealtican youth can hold responsible ecclesiastical leadership positions, and thereby gain an added measure of prestige and leadership training unavailable elsewhere in the village.

For these reasons, and undoubtedly others, Protestantism holds a special attraction to the young married couple in the village. They are in the process of endeavoring to establish their own identity and values, and are not intimidated by foreign ideology. They hold great expectations for the future and desire to achieve as much as possible. Thus many see in Protestantism a vehicle to a life of greater personal satisfaction and achievement. Furthermore, after they have been converted, their exuberance and enthusiasm qualify them as outstanding missionaries to their friends and associates.

Trauma as a Factor Preceding Conversion

Although conversion can be explained in terms of indirect economic incentives and age, these social determinants do not account for the behavior of numerous individuals who, in spite of possessing an awareness of the benefits of Protestantism and being young, are not attracted to Protestantism strongly enough to take the conversion step. A complete understanding of why a particular individual does or does not convert can only be attained through an analysis of the role of trauma as a factor preceding conversion.

Protestantism in Nealtican attracts individuals who, for varying reasons, have experienced unbearably high amounts of trauma and who have become disenchanted, either spiritually or intellectually with their current status in life. Fifty-six percent of the Protestant converts cited manifestations of trauma as reasons for their leaving the mother church.

Trauma is generally associated with either a disagreement over specific Catholic beliefs or practices, or with a personality conflict with an individual who, in the convert's mind, symbolizes the Catholic church. The most common doctrinal criticism of Catholicism by converts is the Catholic use of images and the resultant idol veneration or worship. Other frequently criticized practices are infant baptism, and the implicit or explicit Catholic tolerance of alcoholic beverages and of marital infidelity.

In addition to criticism of specific Catholic beliefs, conversion is invariably accompanied by a deep, inner conviction, called a "testimony" by the Protestants, of the truthfulness of the unique beliefs of the newfound sect. For Pentecostals, this includes a severe restriction on social activities, including the avoidance of dancing. For the separatist-Mormons, it includes the teachings of Margarito Bautista concerning polygamy, the united order, and the future role of the "Lamanites," or native American Indian peoples. For the Mormons, it includes the teachings of Joseph Smith, among which are the Book of Mormon being a spiritual history of the ancient inhabitants of the Western Hemisphere, and the restoration and continuance of the priesthood authority through the latter-day quorum of 12 apostles. Teachings common to all three non-Catholic groups include abstinence from alcohol and tobacco, the payment of a 10 percent tithe, the manifestation of charismatic gifts of the spirit, abstinence from premarital and extramarital sex, the second coming of Jesus Christ to reign in person over the earth for a thousand years, and a lay clergy.

Trauma can also arise from personality conflicts. Perhaps the priest failed to come as promised to celebrate a memorial Mass arranged by the peasant, or perhaps the _padre_ refused to perform a sacrament because the peasant could not meet the price. Or perhaps the peasant became disillusioned because he chanced to observe an improper act of the priest. Others may be offended by a _cargo_ holder and blame the church, or become frustrated at not being chosen for a certain position within the _carguero_ system. Regardless of the specific reason, the former tranquillity of the peasant is gone and can never be restored. Even if the peasant and his offender later reconcile, or if the coveted _cargo_ position is finally achieved, the scar will always remain; the peasant's trust and confidence in Catholicism will never again be complete.

The absence within the Catholic church of charismatic gifts of the spirit, such as healing or the gift of tongues, was cited as a source of trauma leading to Catholic apostasy by only 2 percent of the Protestant peasants, and with the exception of the Pentecostals, is not usually a significant factor preceding conversion.

The Proselyting Process

Trauma and disenchantment are often fomented among Catholics by their non-Catholic relatives, friends, and associates, who are trained and continuously encouraged to engage in proselyting activities. In contrast to a Catholic villager, whose religious affiliation requires little or no activity on his part, the Protestant peasant is taught that individual salvation is dependent upon acceptance and active practice of his faith. The Protestant thus has an unfeigned, sincere concern for the spiritual welfare of his Catholic spirit-brothers which transforms him into a dynamic propagator of the faith. Let a Catholic and a Protestant associate with each other for a relatively short period of time, be it as neighbors, relatives, or work associates, and it is almost inevitable that the Protestant will bring up the subject of religion and endeavor in some way to plant a seed of discontent in his friend's mind. This is often bewildering to the Catholic, who cannot understand why his associate is so concerned about religion. For a Catholic who is satisfied with his church, such Protestant efforts are futile. If, however, fate happens to have produced even the slightest amount of religious discontent in the Catholic, the Protestant has found a receptive audience. The Protestant will report on his success to his ecclesiastical leaders who in turn will chart a plan of action geared toward the specific personality of the potential convert or, as the Protestants refer to him, investigator.

A planned, active proselyting program is outlined for each investigator. Stress is placed on fellowshipping and loving the individual into the faith. Ninety-eight percent of the converts cited the fellowshipping of friends and relatives as a factor contributing to their conversion.

Church members who know the investigator will be assigned to visit him and invite him to attend activities of his liking, such as a dance, an outing, a party, or a basketball game. Gradually, the investigator progresses from social and cultural contacts with church members to deeper religious and philosophical discussions. The basic doctrines are taught him and he is invited to attend Sunday services. He is encouraged to study carefully the scriptures and other publications of the church, and pray until he receives a personal, spiritual manifestation of the truth. Thus the ultimate source of conversion for the Protestant convert is a spiritual communication from God. While the reality of this communication cannot be confirmed by the scientific method, it cannot be disproven either. There is no doubt that, in the minds and hearts of the converts, it is as real as any tangible object in their lives. The strength of this testimony will determine, to a great extent, the future activity of the new members.

Once a testimony has been achieved, the Pentecostals and splinter-Mormons invite the investigator to join the church through baptism. The Mormons, however, have one remaining step before baptism. Arrangement is made for the full-time missionaries, the majority of whom are Anglo-Americans serving two-year missions in Mexico, to come teach the investigator the official missionary lessons. The utmost respect is held for these missionaries and they are not called in until it appears likely that the investigator will accept baptism. They then visit the investigator in his home ten or twelve times over as short a time period as circumstances will permit. Invariably, a strong bond of mutual love and respect is built up between the missionaries and the convert. As part of the investigator's preparation, he is taught about the history of the Mormon struggle for religious freedom in the United States, the trek of the Mormon pioneers across the Great Plains, and the establishment and growth of the L.D.S. empire in the intermountain west. He is told of various L.D.S. accomplishments in the United States, such as Brigham Young University, and taught to love and respect the church's general authorities, almost all of whom are Anglo-Americans. Any hostile feelings which the investigator may have harbored internally toward Americans are eliminated or at least reduced. The investigator's worldview is dramatically expanded as he comes to see himself as an important member of a growing, worldwide organization. His previous suspicion and distrust of outsiders is ameliorated for he now believes that at least some of them are genuinely concerned about him. This is just the start of the almost total transformation of his viewpoints, activities, and aspirations that will be continuously wrought in the succeeding years as he remains an active participant in his newfound religion.

After the full-time missionaries have completed their lessons, the investigator is invited to be baptized. It is often the culmination of an extended period of study and reflection on the part of the investigator, and an ample reward for the efforts of all the members who have assisted in the proselyting. The decision to break with Catholicism is not taken lightly, for it represents a severance with centuries of tradition. It is not surprising that the period of prebaptismal investigation is usually lengthy, averaging 3.1 years. Religious conversion is a difficult innovation in a way of life that requires a person of stable personality and strong convictions, for it, like all other innovations, is a risk, whose future consequences and ramifications are uncertain. Only the mentally hardy and the emotionally secure are willing to try. This is a partial explanation of the high postbaptismal Protestant activity rates in the village, other likely reasons being the high rate of Protestant involvement in terms of time and money and the strength of the convert's spiritual testimony.

Who Are the Converts?

The following case studies are presented to illustrate the types of individuals attracted to Protestantism, and some of the proselyting techniques which are used. It should be noted that, in each case, trauma arose and was subsequently negated through conversion to Protestantism, and that the fellowshipping of the investigator was an indispensible element of the conversion process.

Rosaliano Hernández--Pentecostal

Three years ago, Rosaliano Hernández, like most of his neighbors, was a totally inactive Catholic with no particular overt spiritual inclinations. He states that one day he was stricken with a severe appendicitis attack and it appeared certain that he would have to undergo an operation. His fear of an operation drove him to the Pentecostals whom he had heard healed people. They laid hands on his head, annointed him to be healed, and he was miraculously cured after exercising great faith on his part. He joined the church. He recalls that his will power soon weakened, however, and he succumbed to the enticements of his former compadres and began drinking. Shortly thereafter, his appendix flared up again. He thought he was going to die. He then came to the conviction that God was punishing him, so he stopped drinking. His condition continued bad, however. He decided to exercise great faith and not go to the doctor, but rather to put his life in God's hands. He continued to labor in the fields and about two days later, while working, the pain suddenly left. It has never returned and he has continued faithful in the church to the present time.

Marcelino Osorio Castillo--Splinter-Mormon

In the early spring of 1940, Marcelino Osorio Castillo, then a young man 23 years of age, became interested in the group of Mormons who were holding services in the village. Marcelino was an ambitious young man, who was impressed by the way in which the Mormons lived and the opportunity the religion offered him to achieve power and prestige. In retrospect, he now attributes his initial interest to the intervention of a kind God enabling him to see the light of truth. He began to attend the services in spite of social criticism from his Catholic friends. The Mormons gave him the Bible, Book of Mormon, and Book of Doctrine and Covenants to read. After considerable study and prayer, he requested church membership. Immediately thereafter, the North American missionaries visited him in his home and prepared him for baptism, which occurred some three months after his initial contact with the church.

Like many other members of the church throughout Mexico, he became convinced of the need for a Mexican mission president, and joined the

Third Convention. It appears that this nationwide Mormon splinter movement was an outgrowth of a lust for the power and prestige associated with the position of mission president, the highest church office in Mexico, and of the strong wave of nationalism and associated xenophobia that established itself following the Revolution. While a member of the Third Convention, Marcelino was ordained to the office of elder in the Melchizedek Priesthood by Narciso Sandoval. He was also made president, under the direction of Abel Paez, of the Nealtican branch of the Convention. The subsequent failure of Paez to return as he had promised, and the reconciliation to the main church in 1946 of Paez and many others of the branch, was a very bitter experience for Marcelino. He vowed that he would never betray his beliefs. For the next six years, Marcelino's religious activity was restricted to informal contacts with the other four unreconciled members of the Third Convention. Then in 1952, missionaries sent by Margarito Bautista found Marcelino. He accepted Bautista as a prophet and also his teachings regarding the law of consecration and polygamy. Marcelino was ordained an elder a second time and called to serve as Nealtican branch president.

To the present day, Marcelino still considers himself a Mormon. He is convinced that the members of the mother church, those of the capilla (chapel), have apostatized from the truth. He explains that the capilla members have the Aaronic Priesthood, but not the higher, or Melchizedek Priesthood. He harbors no ill feelings toward the Anglo-American Mormons, and confidently predicts that some day they will return to the truth.

Rosendo Tlatelpa--Latter-day Saint

Rosendo's conversion first began in 1943 at age 28, when a friend who was investigating the Mormon church told him that the Catholic doctrines were erroneous. This came as a shock to Rosendo who had been an active Catholic all his life. He took his friend's statement as a challenge, and set out to disprove it. He traveled to Puebla where he obtained a Bible. Over the next year, he spent every spare moment reading the scriptures. As he studied, however, he became convinced that the Catholic practices were false. He was particularly impressed with the Biblical injunction against the veneration of idols.

After his own "conversion," he began attending the L.D.S. services without any prior invitation from the members. Once he began attending, however, he was heavily fellowshipped. He was impressed by the strict Mormon moral code (falta de vicios). Although not yet a baptized member, on October 3, 1945, he sold a small lot of land to the church as a future chapel site. Finally, on May 11, 1946, three years after his friend's challenge, Rosendo was baptized.

Rosendo's baptism was a significant advance for the church, for he was one of the village's leading citizens. In 1949, he was appointed head of the village Geographical Committee and with Onésimo Castillo, a Catholic associate, mapped the municipio for inclusion in the 1950 national census. For his services, he received a certificate from the federal government. A few years later, Rosendo initiated the village's request for postal service. On June 22, 1953, the cornerstone of the Benito Juárez School was laid in the presence of the municipal school construction committee whose chairman was Rosendo. In January of 1955, Rosendo was the first to suggest that the grade school be expanded from four to six grades. In February, 1960, he began a three-year term as regidor, or member of the village council. Finally, on January 19, 1964, Rosendo was named president of the municipio reforestation program. Throughout most of this period, from April 29, 1951, to October 30, 1966, Rosendo served as branch president of the L.D.S. church.

At present, Rosendo is serving as a member of the stake high council. He has traveled, at his own expense, to the United States on numerous occasions to participate in church activities. He is renting one-half hectare of his land to the ward for use as a welfare project. He attributes all of his success in life to his training in the church.

Postconversion Adjustments

One of the principal adjustments required of the Protestant convert in Nealtican is the severing of all godfather (compadrazco) ties. These are often lifelong associations which involve twice-annual exchanges of presents, and even more importantly, numerous common social activities, most of which include the imbibing of alcoholic beverages. Not only does the Protestant teaching against alcohol contribute to the severing of the ties, but the failure of the Protestant to attend the Catholic religious functions at which the socializing frequently occurs also works against the former association. Furthermore, even if the convert should attend the fiestas, he would be unwelcome. What fun is it, for example, to have a compadre who does not drink? Consequently, it is by mutual accord that the compadre relationship is ended after conversion.

This often forces the convert to acquire a surrogate kindred, all or many of whom are naturally going to be church members who hold common beliefs and aspirations. This in turn brings the convert closer to his new church and is a positive factor in encouraging church activity. In like manner, the few cases in which the convert fails to become active in the church and falls back into his former lifestyle can usually be traced to the failure of the old members to establish lasting friendships with the new member, and not to doctrinal disagreements. Under the new church friendships, the word compadre has evolved a different meaning for Nealtican Protestants. The only time that it is used is when two young people of the same Protestant faith marry. The parents of the new couple then refer to each other affectionately as compadre or comadre. The usage of the term implies no reciprocal exchange of gifts or mutual obligations.

While conversion to Protestantism results in a loss of the compadre relationships, it does not affect the achievement of the honorific title of don. Donship, in Nealtican, is achieved by earning the respect of one's associates. This is most often done through meritorious service. It can also be achieved through the respect engendered from old age and, consequently, it is rare that a man will reach his fifties without becoming a don. Baptism into a Protestant faith does not affect donship status, and it is not uncommon to hear Catholics and Protestants alike refer to a Protestant as don.

Notes

[1] Redfield, A Village That Chose Progress: Chan Kom Revisited, p. 92.

CHAPTER SEVEN

THE RELIGIOUS HISTORY OF NEALTICAN: A STUDY OF THE DIFFUSION OF RELIGION AT THE VILLAGE OR CORPORATE LEVEL

The Catholic Era

The first Catholic bishopric awarded jurisdiction over the inhabitants of Nealtican was the Obispado Carolense y de Santa María de los Remedios, founded in Yucatán in 1518. One year later Cortez and his band of conquistadores disembarked on a sandy shore near the present site of the city of Veracruz and commenced their historic conquest of the Aztec empire, of which Nealtican was a part.[1] The unique relationship of church and state in the newly unified nation of Spain granted the Spanish king authority to appoint bishops and delimit bishoprics in the New World. On October 19, 1526, Carlos V, anxious to reward the Tlaxcalan Indians for their loyalty and assistance against the Aztecs, ordered the seat of the Obispado Carolense transferred to Tlaxcala, some 25 kilometers north of the present-day city of Puebla.[2] This created the incongruous situation of a tiny Indian town serving as the site of the first diocese of New Spain with ecclesiastical jurisdiction over all of southern Mexico, including Oaxaca, Chiapas, and Yucatán.

In 1527, the first bishop of Tlaxcala, Julián Garces, arrived and took up residence in the palace of the former Tlaxcalan lord, Maxixcatzín. The palace became an episcopal cathedral dedicated to Santa María de la Concepción. From the start, Bishop Garces was dissatisfied with the site as an episcopal center. His principal concern was that Tlaxcala, as an

Indian province, was nominally closed to Spanish settlers. By 1531 he had written the queen asking that Spaniards be allow to settle the valley. The petition was approved in 1532.[3]

The queen's action came too late to save Tlaxcala as an episcopal center, however, for on Sunday, April 16, 1531, Mass was celebrated by friar Toribio Buenavente Motolinia at a site along the banks of the Atoyac River, marking the founding of the city of the angels, La Puebla de los Angeles.[4] The site occupied by the new city was more favorably situated than Tlaxcala with respect to the principal trade route between Mexico City and Veracruz. In addition, it occupied a central position within a valley considerably larger and potentially much wealthier than Tlaxcala. In contrast to Tlaxcala, Puebla was a truly Spanish town, to which Indians had to be forcefully imported as workers.[5] Bishop Garces soon turned his attention to Puebla and by 1539, the Bishop and part of the episcopal council were actually residing in the new city at the request of the Spanish residents. Royal approval for the transfer of the bishopric was granted in a cédula dated June 6, 1543, thereby placing the natives of Nealtican under the control of Puebla and assuring that Tlaxcala would continue as an Indian entity.[6]

In a manner befitting her Spanish population, Puebla developed during the colonial era into one of the principal centers of Catholic strength. By 1637, the bishopric had over 700 resident priests.[7] Cuevas, complaining of the geographical imbalance of both secular and regular clergy in New Spain, noted that by 1880, over 1,000 priests resided in the city of Puebla alone while in all of Alta California there were less than 40.[8] The explanation for this imbalance lies partially in the near universal ecclesiastical imbalance between rural and urban regions in colonial Mexico.

Owing in part to a royal decree, issued in 1533, which required that all Indian centers, or cabeceras, serve as church sites, the 16th and 17th centuries were times of widespread church construction.[9] Much of the effort was under the direction of the clergy. Ricard divides the settlement efforts of the religious orders in New Spain into three patterns.[10] The first, penetration missions, was utilized in frontier zones by the Jesuits. In the Puebla region, two additional patterns were employed. The Dominicans preferred a concentric or encirclement pattern in which churches were constructed at regular intervals in a circle, around the central city of Puebla (Figure 18). The predominant clerical order of 18th-century Puebla, however, was the Franciscan, which employed an occupation pattern.[11] This latter consisted of constructing churches at regular intervals along relatively straight lines radiating out from the capital city (Figure 19).

Although the precise commencement date for construction of the Nealtican Catholic church is unknown, its completion in 1739 indicates that it was likely a part of the Franciscan effort throughout the Puebla valley. A further evidence for this belief is the series of churches which are in use at almost every village along the old highway, or camino real, between Cholula and San Nicolás de los Ranchos.

The fact that Nealtican had a completed church by 1739 should not be taken as proof that the village has had resident clergy from that date to the present time. Gibson wrote that the vast majority of 16th-century Mexican churches were small edifices known as "churches of visit," (iglesias de visita), which housed no friars, but were served by traveling

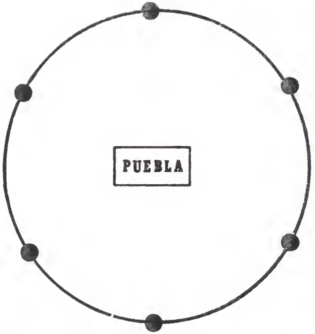

FIGURE 18. CONCENTRIC OR ENCIRCLEMENT SETTLEMENT PATTERN OF THE DOMINICANS

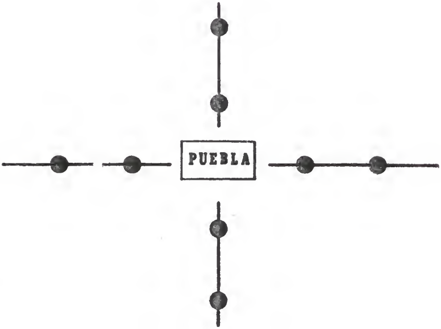

FIGURE 19. OCCUPATION SETTLEMENT PATTERN OF THE FRANCISCANS

clergy from conventual towns.[12] Ricard, on commenting on the same subject, noted that the Indian villages outside Mexico City and Puebla often went five years without seeing a cleric. Then when one passed through, "he said Mass, baptized, married, and left."[13] It is probable that Nealtican was among these villages which received only infrequent clerical visits.

It appears, then, that by the end of the 18th century, two Catholic religious systems were operative in the Puebla valley. In the capital city of Puebla and its environs, literally hundreds of churches and thousands of clerics functioned in opulence, supported by Spanish wealth. The priests formed a part of the upper class, and enjoyed the material and cultural perquisites of that standing. Their parishes were, for the most part, prosperous and refined. Outward religious devotion and piety in the capital were required attributes for social success and advancement.

In Nealtican, only 30 kilometers yet a day's journey by foot away from the capital, a second Catholic religion was operative. A single unpretentious church was built to serve the villagers (Figure 20). Visits from the clergy were limited to the irregular trips of a father from the neighboring village of San Juan Tianguismanalco. The father was almost as economically and culturally deprived as his constituents. Catholicism, to the vast majority of the campesinos, meant attendance at a few religious celebrations and total submission to the father. Its teachings remained vague because the father was rarely present to offer religious instruction, Mass was said in Latin, and even if the villagers could read, they were instructed not to study the Bible.

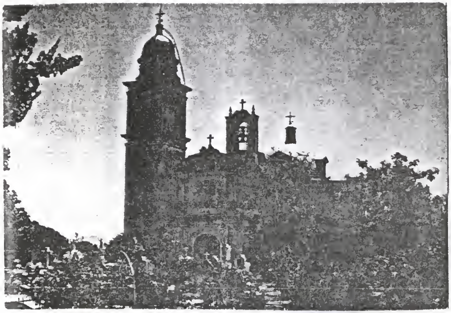

FIGURE 20. CATHOLIC CHURCH IN NEALTICAN

The achievement of independence did little to break up the two religious systems. By the last of the 19th century, the people of Nealtican, like countless Mexican villagers, were living, as it were, in a world of isolation, ignorance, fear, and poverty. They were slaves in a very real sense to the Spaniards, who attempted to control their bodies through the hacienda system and their minds through Catholicism.

The Period of Protestant Preparation

One day in 1877, Doctor Plotino Rhodacanaty, a native of Mexico, was browsing through a used bookstore on Seminario Street near the cathedral in Mexico City. A small book entitled "Selected Portions from the Book of Mormon" (Trozos Selectos Del Libro De Mormón) attracted his attention. He purchased the book and took it home where he studied it carefully. Through his study, he became convinced of the Mormon doctrine. He wrote to John Taylor, then president of the church, in Salt Lake City, requesting additional literature. By this time Dr. Rhodacanaty had discussed his new beliefs with numerous friends and relatives and was holding weekly study sessions in his home to which upwards of 50 people attended. Repeated requests by Dr. Rhodacanaty convinced President Taylor of the wisdom of sending missionaries to Mexico. On November 15, 1879, Moses Thatcher of the church's Council of Twelve Apostles, arrived in Mexico City, accompanied by Melitón Trejo, James Z. Stewart and others. Within a week, nine of Rhodacanaty's group were baptized, and a small unit of the church, known as a branch, was organized with the doctor as president.[14] Two weeks later, a small number of disaffected Catholics who had been meeting for Bible study at the home of Julián Rojas in the rural town of Osumba, state of Mexico, invited the same group of

---

missionaries to address them. All but one of the Bible class were baptized and the second branch of the church was organized in Tecalco, a section of Osumba, at the western base of Popocatépetl.[15]

The first period of L.D.S. missionary activity in central Mexico lasted only ten years. In 1889, church emphasis in Mexico was shifted from proselyting to colonization in northern Chihuahua state, where colonies had been established in late 1885 as places of refuge for church members who were being persecuted in the United States for practicing polygamy. During these ten years, 18 North American missionaries had served, converting 241, and organizing ten branches.[16] As far as is known, none of the missionaries were assigned to labor in the Puebla valley. This does not rule out the possibility, however, that native members from Osumba and other towns on the western slopes of Popocatépetl and Iztaccíhuatl might have undertaken missionary work among their fellow peasants on the eastern side of the volcanoes.

Sometime in the late 1800's, in San Matías, a small village near the town of Cholula, a young man, surnamed Chichía, became convinced through personal Bible study of the impropriety of the Catholic use of images and the custom of infant baptism. He sought out an explanation from his brother, a Catholic priest, who replied that he did not have time to answer him. The young dissident left the Catholic church and became a Methodist, which he remained until 1910. In that year, two Mormon missionaries were sent to labor in the valley of Puebla for the first time, church proselyting activity having been reinstituted in central Mexico in 1901. The missionaries decided to start their labors in Cholula, where they went from house to house, leaving church literature with all who would accept it. The local Catholic priests were quickly

---

apprised of the situation and drove the missionaries out of town and burned their pamphlets in front of the cathedral. The two missionaries were forced to leave in September after having spent only six months in the region. All they had to show for their efforts were four unbaptized "investigators" as they called individuals seriously studying the church. The four were Juan Barrera of Cholula, Mr. Chichía and his daughter, Angela Chichía, both of San Matías, and Francisco Sandoval, a peasant from the nearby village of San Gabriel Ometoxtla. By 1913 all Mormon missionaries had to be recalled to the United States as the Mexican Revolution raged. The missionaries returned to Puebla in 1923, in which year Angela Chichía and her son Carlos, age 23, were baptized, her father having passed away in the interlude. Two others baptized were Francisco Sandoval and his son, Narciso Sandoval, age 24. A branch was formed and the first meetings were held in the Chichia home. Persecution soon dictated the need to hold services elsewhere, however, and the branch was moved to San Gabriel in 1928. A year later a small chapel was erected.

A few years earlier, in 1926, the Mexican government had decided to enforce the constitutional amendment which bars foreigners from active missionary proselyting. The L.D.S. missionaries were thus forced to leave for the third time and the responsibility for all administrative and missionary activity was turned over to the native Mexican church leaders until 1934, at which time missionary work was again permitted by the government, but only by Mexican nationals.[17]

Meanwhile, Nealtican was experiencing a slow yet significant breakdown of the physical and psychological isolation that had enshrouded the village from time immemorial. In 1907, a four-year grade school was

---

completed bringing, for the first time, the liberalizing influences of education into the village. The Revolution brought two profound changes. The first was the destruction of the hacienda system, which permitted the peasants much greater political and economic freedom. The second was the establishment, in 1917, of a civil registry to record births, marriages, and deaths, thereby greatly reducing the power and influence of the Catholic church. The year 1920 witnessed the establishment of two additional liberalizing influences. The first was the granting, on April 5th, of municipio status to the village. This had the effect of greatly increasing the amount of contact between the village and Puebla, the state capital. The second was the reconstruction of the bridge over a deep chasm on the road to Cholula, thereby facilitating the flow of traffic in and out of the community.

Thus numerous, seemingly unrelated, events over a 50-year period combined to set the stage for the introduction of non-Catholic religions into the village. Whereas as late as 1870 there were no Mormons in Mexico and Nealtican lay lost in physical and cultural isolation, by the late 1920's, native Mormon missionaries were actively proselyting in nearby villages and Nealtican had been quickly thrust into the mainstream of Mexican life.

The Period of Protestant Establishment

Soon after the establishment of an L.D.S. branch in San Matías in 1923, Diego Tequeanes, a native of Xalizintla then residing in Cholula, was baptized. He converted a friend, Pedro Castillo, a resident of Nealtican, who was the first Mormon of the village. Castillo in turn converted his brother-in-law, Benito Panuaya. The two young men began to preach and soon converted Rafael Ramos. Meanwhile, Narciso Sandoval, then 28 years of age, had abandoned his farm labors to dedicate himself full-time to the preaching of the gospel. One of the first villages he visited was Nealtican where he assisted Castillo and Panuaya in the conversion of Manuel Mendez, age 26. On November 25, 1930, Sandoval conducted a baptismal service at the Nealtican jaguey and six people joined the church. They were Rafael Ramos, Manuel Mendez and his wife Catalina Grande, Casildo Santamaria, and two brothers, Abundio and Casimiro Luna. The next day baptisms were held for five others: Josefa Perez de Mendez, the sister-in-law of Manuel Mendez, María Luz Ramirez, Jesus and Simon Ramos, both brothers of Rafael, and Casimira Grande, the wife of Simon. The average age of these first converts was 23 years. Immediately thereafter, Felipe Barragan and Estanislao Hernandez, two native Mexican members from the San Miguel Atlautla branch, state of Mexico, were assigned by the presiding authorities in Mexico City to visit the Nealtican members in order to prepare them for the formation of a branch. During the next eight and one-half months, the two men visited Nealtican weekly, often staying for several days. The members attended Sunday services in the San Gabriel branch, a two- to three-hour walk one way.

The establishment of the Nealtican branch finally came on August 16, 1931. Prior to that date, at least six others had been baptized. They were Pascual Mendez, brother of Manuel and husband of Josefa Perez, Antonino Mendez, the father of the Mendez family, his wife, Angel Mendez, another brother of Manuel, and the wives of Abundio and Casimiro Luna. With the exception of the Mendez parents, this second group of converts averaged 22 years of age. Thus there were at least 19 adult members at the time of the organization of the branch, of which seven were members

---

of the Méndez family, four were from the Ramos group, and four were Lunas. The common bond linking the group was youth. The average of the known ages was 25 years. As well as can be determined, none, except the Méndez parents, were over 30 years of age. In addition, it is possible that the wives of the four other adult male members were baptized or had become sympathizers. If one assumes 16 children within the group, it is likely that the branch began operations with approximately 35 members.

The Period of Internal Protestant Dissension

The initial rapid growth of the Mormon church in Nealtican was presided over by Antonino Méndez, who was chosen the first branch president. The branch received an unexpected boost sometime in the early 1930's from the death of Father Rendón, the Catholic priest who worked out of San Juan. The father, according to all local accounts, had been very conscientious and faithful in his ministrations to the Nealtican villagers, and was highly esteemed. Upon his death, the clerics in San Juan ceased their regular visits and, from the point of view of the Nealtican villagers, adopted a flippant attitude toward the municipio which continues to the present. As the years have passed, the villagers have reacted by increasingly adopting anticlerical attitudes.

In spite of the Catholic "loss" of the village, the Mormons were unable significantly to increase their numbers. Whereas in 1931, some 35 members attended services, by 1947 only 45 members attended the services. This is attributable to a period of internal schisms which sharply divided the membership. The first loss occurred in 1932 when Casimiro Luna, accused of having committed murder, left with his brother Abundio and their wives.

The loss of the Luna brothers was insignificant compared to the storm which struck the Mormon community four years later. Prior to that time, pressure had been mounting among many members of the L.D.S. branches of central Mexico for the general church authorities in Salt Lake City to appoint a native Mexican to the position of president of the Mexico mission. The general authorities in Salt Lake City insisted that the position was filled through inspiration and that the Lord had not indicated that any of the Mexican brethren should be so called. The standoff resulted in the formation in April, 1936, of a separatist-L.D.S. group called the Third Convention. Over 1,200 members from throughout the states of Hidalgo, Mexico, Morelos, and Puebla joined the movement. Abel Paez was named mission president with Narciso Sandoval, one of the first missionaries to Nealtican, as first counselor. The Nealtican branch was greatly weakened by losses to the Third Convention. The two Luna brothers joined, and were followed by Casildo Santamaría, Benito Panuaya, Simón Ramos and six other men who had joined the church after the organization of the branch. It appears that between a third and a half of the branch left. Abel Paez, the "mission president," visited Nealtican and organized the dissidents into a branch. Before leaving, he prophesied great progress for the group and left them with high expectations, promising to return shortly to assist the members to prepare for the glorious return of the Savior. The euphoria of the dissidents steadily dissipated, however, as the years wore on and Paez failed to return. Soon dissension and despair divided the group and gradually the members fell away, a few returning to the L.D.S. and Catholic churches, but most dropping into total religious inactivity. Apparently the other branches of the Third Convention were undergoing similar experiences, for in May, 1946, George Albert Smith, then president of the Mormon church, saw fit to make a trip to Mexico. In a series of meetings known as the Reconciliation, held in Mexico City, Osumba, and Tula, Hidalgo, those who were willing were accepted back into the church. Five of the Nealtican brethren refused to rejoin the main body, however. These were Marcelino Osorio Castro, Guadalupe Chico, Abundio Luna, Casildo Santamaría and Simón Ramos. For six years following the Reconciliation, these men drifted spiritually, not willing to rejoin the L.D.S. church, yet without an ecclesiastical leader to follow.

At this point, it is necessary to digress briefly to pick up another important thread of events. In 1903, Margarito Bautista, a nephew of Abel Paez, left his Mormon home in Osumba and traveled north. He spent four years among the L.D.S. colonists in Chihuahua before moving to Salt Lake City where he eventually became a volunteer worker in the temple.[18] In 1923-1924 he returned to Osumba convinced that the main body of the church had strayed from the Lord's appointed path in its abandonment of polygamy and the united order.[19] Upon his return to Osumba, Bautista drew away many from the Mormon branch and established his own church in which he advocated the practice of plural marriage and the "Law of Stewardship" in which all material possessions were held in common. Bautista was not personally convinced of the need for a Mexican mission president, yet it appears that he himself fulfilled that need in the minds of those who followed him, particularly after the dissolution of the Third Convention in 1946. In 1952 missionaries sent by Bautista arrived in Nealtican and located the five remaining dissidents. The five began to attend services in Osumba, accepted Bautista as a prophet and were subsequently organized into a Nealtican branch which continues to meet under the leadership of Marcelino Osorio Castro and his son, Abraham.

From the initial establishment of Mormonism in 1931 until 1948, both the Mormons and separatist-Mormons were subjected to considerable persecution. Most frequently, it took the form of social ostracism. Occasionally, however, homes of members were stoned and pillaged. On one occasion, the lives of Antonino Méndez and wife were threatened but no persecution-related deaths are known to have occurred during this period. In spite of the slow growth, the L.D.S. church structure was strengthened internally during this period by the establishment of the so-called "auxiliary organizations." These included a children's group called the Primary and a women's organization called the Relief Society, both established on December 8, 1940, and the church's youth organization, the Mutual Improvement Association, organized on September 8, 1944.

The Period of Rapid Protestant Expansion

The stagnation of Protestant growth in Nealtican ended in 1948. In February of that year, Pascual Méndez, an original L.D.S. branch member who had never left the main body, took the *protesta*, or oath of office, as the incoming municipal president. Many Catholics who had participated, either overtly or covertly, in the persecution of the Protestants, feared the worst, including a closing of the Catholic church. Méndez, however, wisely took advantage of the situation to establish a *modus vivendi* between the two religious bodies. A town meeting was held and all agreed to work for the common betterment of the community regardless of their religious allegiance. This expanded religious freedom from a *de jure* to a *de facto* status in the village. Coupled with the cessation of serious internal schisms within the Protestant movement, and the ongoing failure of the Catholic clerics of San Juan to regain the confidence of the villagers, it opened the way for the continuing rapid Protestant growth.

The growth corresponds closely with the decline of the remaining barriers of isolation in the village. In the late 1920's, once-daily bus service with Cholula was established. In 1949, a town cooperative was formed and purchased a bus which provided previously unavailable transportation to Atlisco and Calpan. A second bus was added to the route in 1954. Between 1949 and 1953, a postal outlet was established for the first time in the village. Between the latter date and 1955, the first telephone was installed. In January, 1955, the instruction in the school was increased from four to six grades, and in April of the following year, a large, new school facility was dedicated by the governor of the state, Rafael Avila Camacho (Figure 21). On January 7, 1961, electricity first came to the village and on January 23, 1972, the presently-capped well designed to provide piped water for the village was successfully tested.

This great influx of liberalizing forces has been accompanied by a rapid growth of the Protestant groups. The L.D.S. grew from approximately 80 members in 1948, to 228 in 1966, to over 500 in 1975. This growth resulted in the branch being divided into two branches in 1972, and the branches being upgraded in 1975 to the status of wards, which classification is reserved for fully organized church units. On October 21, 1961, a large chapel was dedicated (Figure 22). The splinter-L.D.S. group has grown more slowly, counting around 30 members in 1975. The Church of God in the Mexican Republic (Evangelical or Pentecostal) was organized by Mexican missionaries from nearby San Gregorio in 1952, disbanded in 1953, and reorganized in 1966. It had approximately 50 followers in 1975.

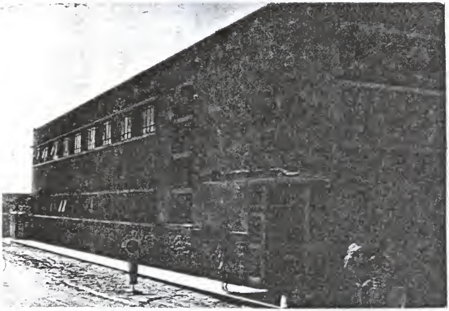

FIGURE 21. BENITO JUAREZ SCHOOL OF 1955

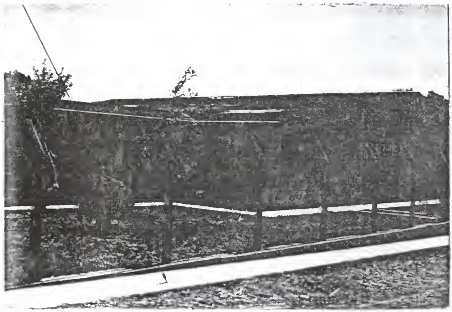

FIGURE 22. LATTER-DAY SAINT CHAPEL IN NEALTICAN

Conclusions

The establishment and expansion of Protestantism in the formerly Catholic village of Nealtican has been preceded and accompanied by the erosion of traditional economic, psychological, and physical barriers. The non-Catholic growth has been accompanied by corresponding increases in modernity as indicated by such factors as literacy, footwear, marriage patterns and language (Table 12).

The history of Protestantism in Nealtican indicates that, within homogeneous societies consisting entirely of peasants, religious innovation is proportionate, all else being equal, to the extent of cultural diversity within the community, which is regulated by the degree of exposure to nontraditional influences.

TABLE 12.—GROWTH OF PROTESTANTISM AND THE DEMISE OF ISOLATION IN NEALTICAN, 1930-1970

Category	Percent in 1930	1940	1950	1960	1970
Non-Catholic	*	3.2	0.4	6.7	8.2
Marriage					
Civil only	8.6	10.9	12.9	24.7	25.6
Religious or religious & civil	86.4	80.3	80.0	66.2	61.5
Common law	5.0	8.8	7.1	9.1	12.8
Literate	22	25	39	53	67
Footwear					
Barefoot	*	62	70	65	54
Sandals or _huraches_	*	37	28	31	19
Shoes	*	1	2	4	27
Language					
Speak Spanish	42.1	98.2	*	93.0	90.5
Speak only Indian	57.9	1.8	*	7.0	9.5

* Data not available

Source: México, Dirección General de Estadística, "_Sexto Censo de Población, 1940_," Puebla, pp. 194-196, 201-202, 220, 223; "_Séptimo Censo General de Población, 1950_," Estado de Puebla, pp. 133, 143, 153, 281, 316; "_Octavo Censo General de Población, 1960_," Estado de Puebla, tomo 1, pp. 389, 513, 527, 556; tomo 2, pp. 1527, 1536; "_Noveno Censo General de Población, 1970_," Estado de Puebla, tomo 22, pp. 197, 206, 215, 288, 306.

Notes

[1] Carrion, tomo 1, pp. 249-255.

[2] Ibid.

[3] Gibson, pp. 54-56.

[4] Carrion, tomo 1, pp. 17-21.

[5] Ibid. Carrion calculated that over 16,000 Indians were forcefully imported to work in Puebla. This included 8,000 from Tlaxcala, 5,000 from Cholula, and 3,000 from Tepeaca.

[6] Gibson, pp. 54-56.

[7] Gonsález Dávila, tomo 1, p. 109.

[8] Cuevas, tomo II, p. 37.

[9] Gibson, p. 43.

[10] Ricard, pp. 177-178.

[11] Carrion, tomo 1, p. 112.

[12] Gibson, p. 42.

[13] Ricard, p. 274.

[14] Flake, pp. 20-21.

[15] Ibid.

[16] Ibid.

[17] Ibid. From 1934 to 1949 the only American missionaries allowed in Mexico were those from the colonies in Chihuahua who held Mexican citizenship. From 1949 to the present, United States missionaries have been permitted to proselyte.

[18] Bautista, pp. 19, 101-106.

[19] The United Order is the term applied by members of the Church of Jesus Christ of Latter-day Saints and the various splinter-Mormon groups to a legal system that advocates a form of commodity ownership. Under this doctrine, church members deed all material possessions to the Lord, represented by church authorities, who then assign land and other necessary commodities back to the members according to their perceived needs and abilities. The church made an unsuccessful effort to have part of its membership live the order during the 19th century. Members

believe that it will be reinstituted when the church is better prepared, and that it will be practiced during the millenium. For further particulars, see The Doctrine and Covenants of the Church of Jesus Christ of Latter-day Saints, sections 42, 51, 70, 72, 78, 82, 104, 105.

CHAPTER EIGHT

CURRENT RELIGIOUS CONDITIONS

Structure and Organization

Catholic

Catholicism functions at two levels in Nealtican. The village's only direct contact with formal Catholicism, the first level, comes through the irregular visits of a priest from the parish of San Juan Tianguismanalco. The parish is under the ecclesiastical jurisdiction of the archbishop of Puebla who, in turn, is responsible to the Pope in Rome.

The individual peasant's contact with official Catholicism has been steadily decreasing since the death of Father Rendón over 40 years ago. The almost daily visits of the father prior to his demise afforded the villagers an opportunity to attend Mass regularly each Sunday, and to arrange for special memorial Masses to be said on the birthdays of deceased loved ones. The memorial Masses were very important to the villager, who would invite friends and relatives to his home for a special dinner and fiesta after the Mass, in which chicken, covered with a dark, hot sauce known as mole, would be served.

Father Rendón's successors down through the years have not been as dedicated as he. The neglect appears to have reached the critical stage around 1971 with the transfer from Tochimilco of the priest currently assigned to visit Nealtican. The villagers are unanimous in their condemnation of the father as unreliable and irresponsible. Sunday Mass is held no more than twice monthly, and the villagers never know from week to week when the padre will arrive. When he does come, he is frequently two or three hours late, and rushes through the Mass forgetting some of the lines. On special feast days, he often shows up three or four days late for the celebration of a memorial Mass, thereby destroying the purpose of the Mass for its sponsor.

The padre is equally unpredictable on general holidays, as his performance on the day of Saint Anthony, January 17, 1975, indicated. The children of the village arose extra early to wash and pretty-up their animals and have them at the church by 8:00 A.M., the time set by the priest to bless the pets. As the bells tolled eight, the children and animals were all in line awaiting the father's blessing. The padre, however, had not arrived. As the hours passed, the children tired of waiting and returned to their homes. When the priest finally arrived, at 6:00 P.M., there were no animals waiting to be blessed.

Such actions by the padres, continued over a long period of time, have caused the villagers to build up a protective shell of anticlericalism and religious indifference. By 1975 the men of the village had become openly cynical. Typical comments about the padre included the following: "They must have assigned him here because they couldn't stand him in Tochimilco," "the people are getting fed up with the padre," and "the padre comes only when you pay him well."

The second level of Catholic organization in the village consists of a small number of lay positions which are remnants of a once-flourishing cargo system (Figure 23). The actual head of the cargo system is the municipal president, who is nominated by officials of the state

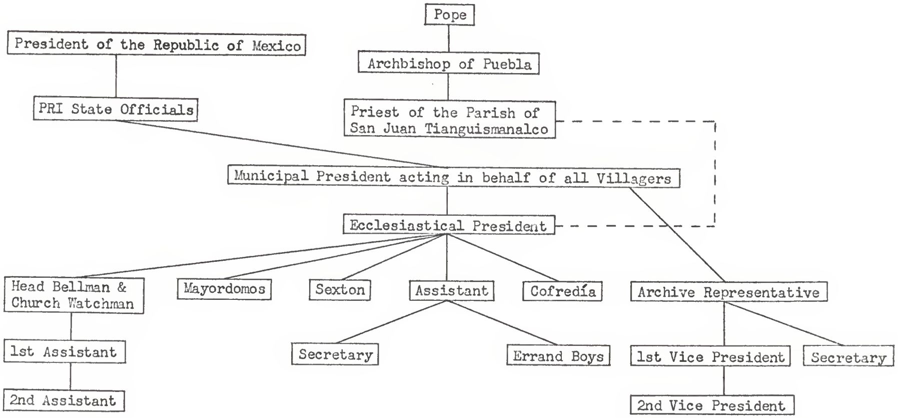

FIGURE 23. CATHOLIC CHURCH ORGANIZATION IN NEALTICAN

organization of the PRI. If one follows this line of authority to its end, it becomes apparent that the ultimate head of the Catholic church in Nealtican is the president of Mexico. This fact reflects the potential influence of the state in all religious bodies in the country.

On the 29th of August of each year a meeting for all Catholic villagers is convened in the church for the purpose of choosing the cargo holders. The meeting is presided over and conducted by the municipal president. The clergy from San Juan are not represented. If, as has been the case for nine years since 1948, the municipal president is a Protestant, it makes no difference—he still presides. This creates the incongruous situation of having a Mormon or Pentecostal as de facto head of the local Catholic church. The failure of the situation to provoke any resistance from the Catholic villagers is indicative of the prevailing apathy of the peasants toward the mother church.

It is the responsibility of the municipal president to come to the meeting prepared with nominations to fill all cargo system positions. Most of the nominees are then approved or disapproved by a general consensus vote of the villagers present, who also nominate and approve substitutes for positions left open by rejection of the president's initial nominees. The most important position is that of ecclesiastical president (fiscal principal), who has the responsibility of overseeing all other cargo holders and arranging for the visit of the padre on the ten village feast days. The ecclesiastical president is aided by an assistant (suplente) and a secretary. He also supervises the sexton, who is charged with the care of the sacristy and ornaments in the church, and the cofredía, who lights the candles for the padre during Mass.[1] In addition, eight young boys of ten or eleven years of age are chosen to

---

act as acolytes (acólitos). One is on call each day to act as a messenger or run any other errands or do odd jobs.

Responsibility for the physical maintenance of the church edifice is delegated to a watchman-bellman (portero-campanero). He is aided by two assistants. Each serves for a week, after which he has two weeks off. While on duty, the watchman literally lives at the church, owing to the fact that it is considered essential that a guard be present at all times. The guard's meals are either brought to him by his family or else he prepares them himself over a small fire he builds within the courtyard. Sleeping quarters are provided in a room near the sacristy formerly utilized by the padres. During the day the guard usually has little to do. He may sweep the church occasionally, but is still faced with long hours of idleness. Perhaps as a result of this boredom, the guard frequently resorts to ringing the bells in the church towers, much to the dismay of the municipal president who may be trying vainly to conduct business in the palacio municipal over the din of the bells. A last responsibility of the porteros is to act as messengers for the fiscal principal in petitioning the visit of a padre.

One of the most prestigious of the cargo positions is that of archive representative. Owing to the fact that the records kept in the sacristy are secular as well as religious, and are of utmost historical and cultural importance to villagers of all religious faiths, this position, as well as those of assistant archive representatives (usually two) and archive secretary, is filled by appointment from the municipal president and is not subject to ratification by the general populace. The archive representatives are charged with the responsibility to care for and preserve the archives, which consist of 73 miscellaneous documents, some, such as the map depicting the founding of the village, of very ancient date and great value, and others of 20th-century origin. Elaborate precautions have evolved to protect the documents. They are placed in a wooden chest kept under lock and key. The chest in turn is stored in a wall shelf in the sacristy, the door of which is also kept locked. The locked sacristy door opens onto an enclosed patio within the courtyard which is entered through another locked door which opens onto the outside street. Thus four locks must be opened in order to actually obtain access to the contents of the archives. As a protection against possible dishonesty by a _cargo_ holder, each key is entrusted to a different individual. These individuals will not use their key unless instructed to do so by the _fiscal principal_ who in turn refuses to act without instructions from the municipal president. The sheer magnitude of coordinating the simultaneous arrival of at least six individuals, all of whom place first priority on their personal affairs, is enough to act as a strong safety measure against unauthorized access to the archives.

The final group of _cargo_ holders is comprised of the sponsors (_mayordomos_) of the Catholic _fiestas_. They are nominated by the municipal president and approved by the villagers. One _mayordomo_ is chosen for each of the ten _fiestas_.

Latter-day Saint

The organization of the Church of Jesus Christ of Latter-day Saints is hierarchical and authoritarian at both the general and local levels (Figure 24). With the exception of the general church authorities, who are called to devote themselves full-time to the ministry and who receive a living allowance, there are no paid clergy.

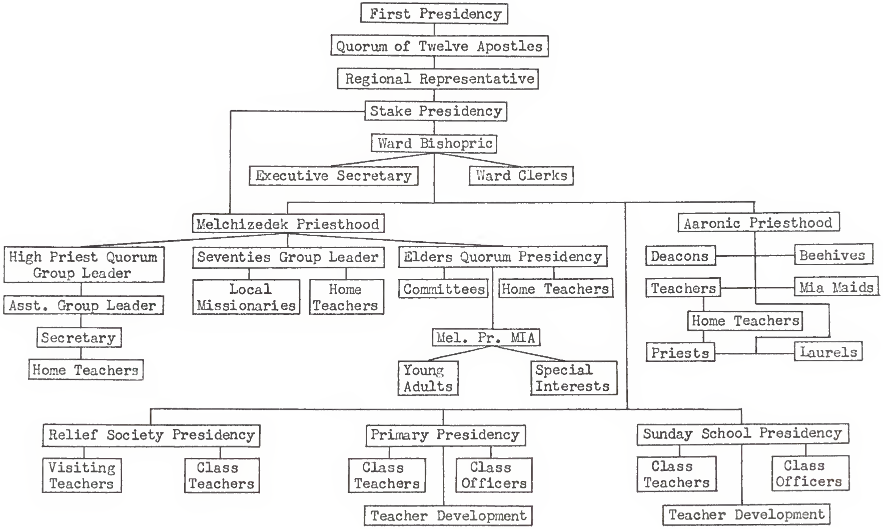

FIGURE 24. LATTER-DAY SAINT CHURCH ORGANIZATION IN NEALTICAN

The church is led by a president and his counselors (usually two), who together comprise the First Presidency. The Quorum of Twelve Apostles presides over all affairs of the church under the direction of the First Presidency. The church is subdivided into large administrative units called regions, coordinated by regional representatives, which are generally composed of four or more stakes. A stake, consisting generally of six or more wards, is presided over by a presidency assisted by a high council of twelve men.

The basic administrative unit of the church is the ward, over which a bishop, assisted by two counselors, presides under the direction of the stake presidency. All males of twelve years of age and over who are complying with the teachings of the church are given the priesthood, the authority to preside and to administer the saving ordinances, and ordained to a rank or office within the same. The three lowest offices, deacon, teacher, and priest, are part of the Aaronic, or preparatory Priesthood, and can be received on a boy's 12th, 14th, and 16th birthdays respectively. Each group except the priests' has a president, two counselors, and a secretary, and is taught twice weekly by a teacher called by the bishop. The bishop acts as president of the priests' quorum, assisted by a group leader and secretary, and also approves presidencies and teachers for the girls' groups of corresponding ages.

Once a boy turns 18, he is eligible for ordination to the Melchizedek Priesthood, usually to the office of elder. The elders' quorum constitutes the backbone of the ward, since most of the adult males belong to it. It is presided over by a presidency which is responsible both to the ward bishop and the stake president. As many as ten committee chairmen, assisted by a varying number of committee members, are called to preside over specific aspects of quorum activity, such as socials, athletics, home storage of food and clothing, and genealogical research. The unmarried quorum members are assigned membership in the Melchizedek Priesthood Mutual Improvement Association, which is divided into two groups, Young Adult for those aged 18 to 25, and Special Interest for those over 25 years of age.

The second group within the Melchizedek Priesthood is the seventies quorum, which has the responsibility to coordinate the ward's missionary effort. The third is the high priest quorum, whose members are assigned to preside over (although not necessarily conduct) all church meetings they attend and to concentrate their efforts on genealogical research. Both the seventies and high priest quorums are directed by a group leader who reports to both the bishop and the stake president.

It is the duty of all teachers, priests, and Melchizedek Priesthood bearers to act as home teachers. A pair of home teachers is assigned to visit each member's home at least monthly and act as a liason between the family and the quorum leader and bishop. The female counterpart of the home teachers are the visiting teachers of the Relief Society. Each adult female member is assigned a pair of female visiting teachers who come to her home monthly. The Relief Society, the church's female organization, is presided over by a presidency who are assisted in their responsibility of instructing the women by four teachers, each of whom presents a monthly lesson on subjects such as food preservation, sewing, nursing, child care, spiritual living, and cultural refinement.

The children's organization of the church is called the Primary. It is directed by a presidency, with a teacher, called by the bishopric, assigned to each age group, ages 3 to 11. The older classes also choose class presidencies.

The last organization is the Sunday School, which meets each Sunday morning and to which all ward members are invited to attend. It also has a presidency and teachers and class officers called for approximately 15 classes.

Separatist Latter-day Saint

The splinter-Mormon ecclesiastical structure is considerably simpler and less hierarchical than that of the parent church (Figure 25). Two heads of the church are simultaneously recognized. The first is the Quorum of Twelve Apostles headquartered in Salt Lake City. This quorum has no relationship with its counterpart of the mother church. Its members practice polygamy covertly. It is led by the chief apostle, known as The Doctor, for his profession, who makes no claim to being a prophet. The second ecclesiastical head recognized by the Nealtican members is the president of the "Kingdom of God," the name applied to the group of members residing at church headquarters in Osumba, state of Mexico. The group consists of about 36 adult men who have two, three, or four wives each. The total membership, including children, is approximately 300. Osumba is recognized as the Kingdom of God because its members are practicing the "Fulness of the Gospel" as polygamy and the united order are collectively referred to. In contrast, the Nealtican members aspire to, but have not yet been able to live, the Fulness of the Gospel.

When Margarito Bautista was president of the Kingdom of God, he was accepted as a prophet by the Nealtican separatist members, higher in authority than the Twelve Apostles of Salt Lake City. Since Bautista's

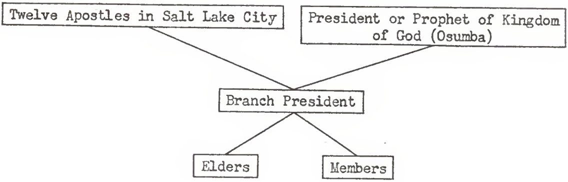
Twelve Apostles in Salt Lake City
President or Prophet of Kingdom of God (Osumba)
Branch President
Elders
Members

FIGURE 25. SPLINTER LATTER-DAY SAINT CHURCH ORGANIZATION IN NEALTICAN

death, however, no president has claimed to be a prophet. In spite of this, the primary allegiance of the Nealtican members is toward the Osumba leadership, rather than the Twelve Apostles. This stems partially from a teaching of Bautista that the North American members are the "gentiles" and the Mexican Indian members are the House of Israel which, according to prophecy, is to overcome the gentiles.

The Nealtican group, called a branch, is presided over by a branch president who is appointed by the President of the Kingdom of God. The branch president and all worthy adult males are ordained elders. No one at present holds any other priesthood office, although there are high priests, deacons, teachers, and priests functioning in Osumba. Owing to the small membership, there are no separate Relief Society, Sunday School, or Primary organizations.

Church of God in the Mexican Republic (Evangelical)

The Pentecostal organizational structure is the least hierarchical of the three non-Catholic groups in Nealtican (Figure 26). The members have minimal contact with, and know nothing about, church organization above the district level. The pastor knows that all districts in the country are governed by a bishop who resides in Mexico City, but is uncertain if any ties exist between the Mexican church and North American members. If such ties do exist, they must of necessity be weak, since no money or regular visits are received from members in the United States.

The principal religious link between the Nealtican members and the outside world is the pastor, Benito Grande. Grande grew up a Catholic in Nealtican, but left the village for Puebla in 1962 as the result of a disagreement with municipal authorities over control of his grandmother's

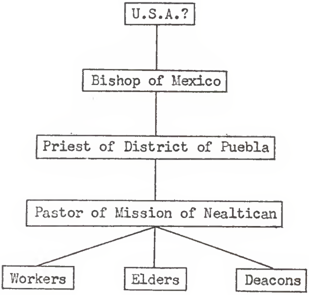

FIGURE 26. CHURCH OF GOD IN THE MEXICAN REPUBLIC
CHURCH ORGANIZATION IN NEALTICAN

land which was taken for the school. In Puebla, he began reading the Bible and became convinced that the Catholic doctrine was false. Some Evangelical friends invited him to attend their services and in 1972 he was baptized into the church. He was filled with a desire to take the gospel back to his native village which had been without a functioning Pentecostal group since the disbandment of the original group in the early 1950's. He began returning to Nealtican on weekends and soon converted his brother, Miguel, and some in-laws. With that start, a mission was organized in Nealtican with Benito as pastor. Three other offices are held in the mission by worthy males: workers, elders, and deacons, ordination to which is based on worthiness and activity rather than age. There are no supplementary organizations functioning within the mission.

Degree of Activity

Roman Catholic

Catholic participation at meetings and in the sacraments has fallen in proportion to the neglect of the priests of San Juan. The average attendance at Mass is around 15 persons, most of whom are from the families of the mayordomos. This amounts to a total attendance of only 30 persons per month or 390 per year. Participation in the sacraments and other religious rites, a second indicator of Catholic vitality, is equally low (Table 13). Knowledgeable villagers estimate that less than two-thirds of the Catholic parents have their babies baptized and confirmed by the priest. Participation in the rites of first communion, second communion and a girl's 15th birthday is almost nonexistent. Less than a fifth of the couples getting married are seeking a religious ceremony.

A third indicator of Catholic weakness is the limited lay activity within the fiesta complex. Only 30, or 5 percent, of the adult male Catholics are active participants in the cargo system in a given year, and the majority of these for only short periods of time (Figure 23). The Catholic villagers celebrate ten fiestas. In order of occurrence they are: Feast of Chalma on February 12 during carnival week, Holy Week in March, Day of the Stone Cross on May 3, Saint Bonaventure on July 15, Ascencion on August 15, Our Lady of Remedios of Cholula on September 1, All Saints Day on November 1, Day of the Dead on November 3, Virgin of Guadalupe on December 12, and Christmas on December 25. Each fiesta has a mayordomo who must bear the entire cost of the fiesta. This averages $1,000 pesos for the seven minor fiestas and $4,000 pesos for Holy Week, Day of the Stone Cross, and Saint Bonaventure Day, the three largest fiestas. The cost of a fiesta, including beer, pork, poultry, mole, firecrackers, and in the case of a large fiesta, an orchestra, is at least $25.00 pesos per person. The poor attendance at the fiestas can be calculated by dividing 25 into 1,000 and 4,000 respectively, indicating an attendance of roughly 40 at the minor fiestas and 160 at the so-called major celebrations. The latter figure is only 2.5 percent of the 6,400 Catholic residents of the village. The fiestas generally resemble a large family gathering. A small group will meet in front of the Cathedral at the appointed hour and slowly walk along a short parade route while singing religious songs. The march will end at the mayordomo's compound where the party will ensue. Meanwhile, life as usual goes on elsewhere in the village.

When an individual is chosen as mayordomo of a fiesta, he has the right to refuse the appointment. This is frequently done by rich and

TABLE 13.—ESTIMATED CATHOLIC PARTICIPATION IN SELECTED SACRAMENTS AND RELIGIOUS RITES

Item	Cost in Pesos in 1975	Percent Who Participate
Baptism	$ 50	65
Confirmation	250	57
First Communion	250	1
Second Communion	1,000	<1
Girl's Fifteenth Birthday	unknown	<1
Marriage	11,000	18

Source: Author field data.

TABLE 14.--AVERAGE WEEKLY ATTENDANCE AT L.D.S. FIRST WARD SERVICES, MARCH, 1975

Meeting	Attendance
Sacrament Meeting	160
Sunday School	116
Mutual Improvement Association	30
Relief Society	20
Primary	12
Priesthood Meeting	32
TOTAL	370

Source: Author field data.

poor alike. Those who refuse to participate suffer very little criticism. The prevailing philosophy among the villagers is that each man has a right to live his own life as he sees fit. Ninety percent of the Catholic adults never accept the position of mayordomo during their lifetime. This places a greater burden on those who are desirous to see the fiestas continued. Even if a man is poor, he will accept the assignment of mayordomo if he considers it an honor, and will "raise the centavos somehow." Out of deference to the high cost of being a mayordomo, an individual is generally given seven or eight years to recover before being asked to serve again. In addition, an individual may serve as the mayordomo of a major fiesta only once during his lifetime.

Latter-day Saint

Activity is extremely high within the Mormon community. The membership is divided into two wards. Each ward holds a minimum of six meetings each week. In March, 1975, First Ward weekly attendance to the various meetings averaged 370 (Table 14). This included 308 at the three Sunday services (Priesthood Meeting, Sunday School, and Sacrament Meeting), and 62 at the female, youth, and children's services held on weekdays. The attendance of the Second Ward was only slightly lower. Together, the average weekly attendance at Mormon meetings was 700, making a monthly attendance total of 2,800, and an annual total of 36,400, which is 93 times greater than the Catholic and is achieved with less than one-tenth the membership.

Mormon activity is equally high with respect to service. At least 129 major church offices exist in each ward, excluding home and visiting teachers and other minor callings (Figure 24). Each active adult holds a minimum of two jobs: the first a regular ward calling and the second as a home or visiting teacher. This requires anywhere from 3 to 60 hours of volunteer time per week, the average being 14.0 hours. This excludes Monday evenings, which are reserved for a family get-together called Family Home Evening.

The allegiance of a Latter-day Saint is tested not only in his willingness to attend meetings and volunteer time, but also in his monetary contributions. In contrast to the Catholics, who construe a tithe to mean a small occasional optional contribution, Mormons believe that an honest tithe constitutes a full one-tenth of one's annual increase, which must be paid if one is to remain in good standing in the faith. In addition, the Mormon villagers are asked to pay numerous smaller sums for specific projects or causes. One of these is the "fast offering." Each member is asked to fast for two meals on the first Sunday of each month and donate the money or food he would have consumed to the bishop for distribution to the poor. The members are also assessed money for the building fund which is used to maintain, furnish, or expand the chapel. Recent acquisitions of this fund include an electronic sound system and an electronic organ. Members are also asked to contribute to the ward budget fund which is spent on supplies and social activities, particularly for the youth and children. In addition, members have the option of contributing to the missionary fund which is used to pay the expenses of full-time missionaries from the ward serving in other locales. By the time a faithful member meets his assessment in each of these funds, he is contributing 13 to 15 percent of his income to the church, excluding additional religious outlays for personal expenses such as books and bus fare to Puebla once or twice monthly to attend stake meetings. A random survey of 40 percent of the Mormon peasants, both active and inactive in church affairs, shows that the average family donates 9.9 percent of its income to the church.

Separatist Latter-day Saint

Activity among the splinter-Mormon group is also high. There are six adult male members, all of whom regularly attend services with their families. Services are held twice weekly, once on Sunday at 10:30 A.M. and again on Wednesday evenings at 5:00 P.M. Attendance at the meetings averages 25, or 83 percent of the total membership of 30. This makes a weekly attendance total of 50 and an annual attendance of 2,600, which is over six times the annual Catholic figure.

Each adult member of the branch has two church assignments. The first is a calling within the branch infrastructure and the second is as a missionary, often to interested investigators in nearby communities. Each member averages 11.5 hours of weekly volunteer service.

The splinter-Mormons are required to pay a full tithe to the Kingdom of God in Osumba. No other assessments are levied upon them, however. The average donation of the members is 8.1 percent.

The Church of God in the Mexican Republic (Evangelical)

The Pentecostal church currently numbers 50 members. Like the splinter-Mormons, services are held twice weekly with an average attendance of 25, making an annual attendance total of 2,600.

The organizational infrastructure requires less volunteer time of the Pentecostals than the other two non-Catholic groups. Although it is a lay church in the sense that all of its members are encouraged to express themselves in speech and song, the majority of the administrative responsibility falls upon the Puebla pastor, Benito Grande, who is reimbursed for his expenses. Those who hold ordinations as workers, elders, or deacons contribute by assisting the pastor, teaching classes, and laboring as missionaries to interested nonmembers. The average member donates 6.2 hours weekly to church activity.

Church members are asked, but not required, to pay a 10 percent tithe, which is used for pay for building and operating expenses, socials, and missionary activities. The average donation is 3.8 percent.

Refutation of the Theory of Conversion for Economic Gain

As was noted briefly in Chapter Two, many students of religion in Latin America are of the opinion that economic gain constitutes a principal motive of Catholic conversion to Protestantism. The reasoning holds that Catholic expenses, including the sacraments and the *cargo* or *fiesta* system, are so high that Protestantism is sought out as a means of financial escape.

The accuracy of this theory is debatable on several counts. Firstly, the theory makes the implicit assumption that the *cargo* system is operative throughout Latin America wherever conversion to Protestantism is occurring. This, however, is not the case for half the region's population, which resides in materialistic-oriented, cosmopolitan urban centers, untouched by any *cargo* system. Willems has accurately described the typical urban Catholic parish as having ". . . thousands of members, most of whom are no closer to one another than the attendants of an artistic performance or a political rally."[2]

Nor does the theory hold up in Nealtican, a poor, rural Catholic community which formerly had a strong *cargo* system. The average Catholic peasant's annual contribution to the Catholic church is only

---

$10.00 pesos, given in support of the Saint Bonaventure Day celebration. A fourth of the peasants refuse to give even this minimal sum. In addition, the only two sacraments which the majority of the Catholics seek for their children are baptism and confirmation, which cost $300.00 pesos per child. The compadre, or godfather system, has been modified to the extent that the only expenses for a participating couple are the exchange of a simple gift twice each year. No gifts are given to the godchildren. Thus the typical Catholic spends between zero and $3,900.00 pesos (at $300.00 for the baptism and confirmation of each of five children and $10.00 annually for 40 years) during his lifetime for religious-related expenses, while receiving little or no social criticism. This is in contrast to the average Nealtican Protestant whose lifetime religious expenditures total over $44,000.00 pesos (Table 15).

In defense of the theory, it can be said that an active Catholic in Nealtican, owing to wedding expenses, will spend more during his lifetime than an active Protestant. In addition, in contrast to the Protestant's annual tithe, the active Catholic's expenses tend to come in lump sums, such as for marriages and mayordomo assignments, which are hard to raise and increase the likelihood of debt.

This does not change the fact, however, that in Nealtican it is considerably easier and more economical to remain an inactive Catholic than to become a Protestant. This fact is universally acknowledged by the leaders of the various faiths in the village, including Brígido Tlalcotía, the Catholic municipal president, who observed, "We are Catholics in name only. It costs more to be a Mormon."

TABLE 15.--AVERAGE LIFETIME RELIGIOUS EXPENDITURES OVER A 40-YEAR PERIOD FOR A NEALTICAN MAN WITH FIVE CHILDREN

Item	Cost in Pesos			
	Inactive Catholic	Average Catholic	Active Catholic	Average non-Catholic
Baptism[a]	0	$ 250	$ 250	$ 0
Confirmation[b]	0	1,250	1,250	0
First Communion[b]	0	0	1,250	---
Second Communion[c]	0	0	0	---
Girl's 15th Birthday	0	0	0	---
Compadres (exchange of gifts on July 15 & All Saints Day)[d]	0	2,000	2,000	---
Marriage[e]	0	0	55,000	10,000
Minor Fiesta Mayordomo[f]	0	0	3,000	---
Major Fiesta Mayordomo[g]	0	0	4,000	---
Church Donations[h]	0	400	400	34,167
TOTAL LIFETIME RELIGIOUS EXPENSES	$0	$3,900	$67,150	$44,167

Source: Author field data.

[a] Based on 1975 cost of $50.00 per baptism.

[b] Based on 1975 cost of $250.00.

[c] Based on 1975 cost of $1,000.00.

[d] Based on two exchanges of gifts annually at $25.00 per gift

[e] Based on 1975 average cost of $11,000 per Catholic marriage and $2,00 per non-Catholic marriage.

[f] Based on 1975 cost of $1,000 per fiesta.

[g] Based on 1975 cost of $4,000 per fiesta.

[h] Based on $10 annual contribution for Catholics, and an average non-Catholic contribution of $854.17 or 8.5 percent of the profit on an average holding of 2.31 hectares. The average profit would be $10,049, of which $1,698 would come from the first hectare, $6,375 from the second hectare, and $1,976 from the final .31 hectare. The latter two figures are calculated by excluding personal consumption costs from Table 8.

Summary

A superficial glance at Nealtican would indicate that Catholicism is the dominant religion in the village. The 1970 census, for example, listed the population as 91.8 percent Catholic.[3] In reality, Protestant attendance at religious services outnumbers Catholic by a margin of 37 to 1. In addition, a vastly greater amount of time is dedicated by Protestants to religious-related activities than by Catholics (Table 16). Furthermore, the typical Protestant spends a greater share of his income on religious activities than the Catholic peasant. For the average Nealtican Catholic, church membership implies little more than acceptance of a passive culture trait. In terms of functional religious activity, Nealtican is a Protestant village.

TABLE 16.—COMPARATIVE ACTIVITY OF CATHOLICS AND PROTESTANTS IN NEALTICAN

	Total Annual Attendance			Annual no. major cargos or church positions	Avg. per capita attendance at all religious functions	Avg. hours donated weekly to religious functions	Avg. annual expenditures on religious functions (in pesos)
	Fiestas	Services	Total				
Catholic[a]	760	390	1,150	30	0.2	2.0	$ 231.55[f]
Combined Protestant[b]	1,200	41,600	42,800	277	73.8	13.2	1,182.33[g]
Mormon[c]	1,200	36,400	37,600	258	75.2	14.0	1,244.85[h]
Splinter-Mormon[d]	0	2,600	2,600	12	86.7	11.5	1,063.97[i]
Pentecostal[e]	0	2,600	2,600	7	52.0	6.2	631.86[j]

Source: Author field data.

[a] Based on 1975 membership of 6,420.
[b] Based on 1975 membership of 580.
[c] Based on 1975 membership of 500.
[d] Based on 1975 membership of 30.
[e] Based on 1975 membership of 50.
[f] In 1975 there were 589 adult male Catholic farmers. Ten percent (59) were active in the cargo system, 65 percent (383) were only partially active, and 25 percent (147) had no direct contact with the church. From Table 15, the active spent an average of $67,150, the partially active $3,900, and the inactive nothing during their lifetimes. By multiplying the number of adherents in each activity category times the average expenditure, a total of $3,961,850 is spent by the active and $1,493,700 by the partially active for a total of $5,455,550, which divided by 589 results in an average lifetime expenditure over 40 years of $9,262.

[g] Based on 34 Mormon, 4 splinter-Mormon, and 3 Pentecostal respondants calculated as per footnotes 8-10 below.

[h] Based on average annual profit of $10,049, of which 9.9 percent or $994.85 is donated annually to the church. Over 40 years this totals $39,794 which, when combined with $10,000 for weddings, results in a lifetime spending of $49,794.

[i] Based on average annual profit of $10,049, of which 8.1 percent or $813.97 is donated annually to the church. Over 40 years this totals $32,558.80 which, when combined with $10,000 for weddings, results in a lifetime expenditure of $42,558.80.

[j] Based on average annual profit of $10,049, of which 3.8 percent or $381.86 is donated annually to the church. Over 40 years this totals $15,274.40 which, when combined with $10,000 for weddings, results in a lifetime expenditure of $25,274.40.

Notes

[1] The cofredía, the title given by Nealtican villagers to him who lights the candles for the priest during Mass, should not be confused with the Spanish word cofradía, which is used throughout much of Latin America to refer to a Catholic religious brotherhood.

[2] Willems, p. vii.

[3] México, Dirección General de Estadística, "Noveno Censo General de Población, 1970," Estado de Puebla, tomo 22, p. 215.

CHAPTER NINE

THE DIFFUSION OF AGRICULTURAL TECHNOLOGY

Technology Capable of Increasing Municipio Agricultural Output

The most practical method of raising the general level of living in Nealtican is to increase agricultural productivity. Owing to the small, nonexpandable land base of the *municipio*, future increases in agricultural output will have to be achieved through increased yields per unit area of land rather than through an increase in total area under cultivation. Following is a brief analysis of what the author considers to be the seven aspects of village agriculture which are most in need of attention and, consequently, which offer the greatest potential for increased productivity and prosperity in the village.

Water Availability

The severe shortage of water in the *municipio* constitutes both the greatest stumbling block and the greatest hope for augmenting yields. Presently, the typical farmer is entirely dependent upon the rains. He is thus limited to one crop annually, grown during the summer rainy season. From October to March the fields remain barren in sharp contrast to the irrigated lands of Santa María Acuexcómac, only five kilometers away, which yield abundant winter harvests of cabbage, lettuce, carrots, and cauliflower.

The depth of the water table and, consequently, the cost of wells, varies from place to place within the Puebla valley. The water table is very high in the low-lying sections of the basin. In parts of the western outskirts of the capital city, for example, one need dig only two to three meters to reach water. As one proceeds westward toward the higher alluvial fans surrounding Popocatépetl and Iztaccíhuatl, there is a proportionate increase in the depth of the water table. At María, it is 20 meters. At Nealtican, however, the average required depth is 80 meters. A fully functional well, 20 centimeters in diameter and 80 meters deep, costs in the neighborhood of 300,000 pesos, or U. S. $24,000. This places wells beyond the economic reach of all but the wealthiest peasants.

There are only two ways the peasant can circumvent the cost of a well. The first is to convince the government to finance it but, up to now, the peasant has received nothing but promises and rhetoric in this regard. The second alternative is to join a cooperative. This requires an unusual amount of financial security, trust, and ability to cooperate, however. Furthermore, owing to the difficulty of organizing and administering a cooperative,[1] a peasant desirous of belonging may find that there is none available.

Only one water cooperative has ever been successfully established in Nealtican. It was organized in 1970 with 42 partners. The well began functioning in 1973 and currently waters 68 hectares of land. It has met with mixed success. The principal problem has been the large number of members. With 42 partners, the water turn is occasionally delayed too long for the sensitive winter crops. The obvious solution is to organize cooperatives with fewer members, but that necessitates intolerably higher contributions from the remaining partners.

If these problems can be overcome, however, wells may prove to be the key to future crop increases in Nealtican. By planting two crops, a summer subsistence crop and a winter cash crop, the farmer in effect doubles the area of his holding. It is theoretically possible to harvest two winter crops; if this procedure became practical, yields could be tripled. Furthermore, the farmer's cash income increases geometrically owing to the high prices that the winter vegetables bring in the Puebla and Mexico City markets.

Credit Availability

Credit, at present, is desperately needed to finance wells. Credit is available to the peasant from four sources. The first is the official government bank (Banco Official) which is divided into three subunits: the Banco Agropecuario (Agriculture and Cattle Bank), Banco Agrícola (Agricultural Bank), and the Banco Ejidal (Ejido Bank). Owing to the absence of an ejido in Nealtican, the latter is not available to the municipio residents. The second source of credit is the Banco Nacional de México (National Bank of Mexico), the third is the Banco de Londres de México (Bank of London in Mexico), and the fourth is the Banco del Oriente de Puebla (Puebla Bank of the East).

Credit rates are reasonably low, averaging 11.5 percent annually. The principal problem, from the peasant's viewpoint, is the restricted availability of the credit. Since the villagers do not belong to an ejido, their credit is not backed by the government. Consequently, they must seek credit as private citizens. Since most of the campesinos are not good credit risks, they are effectively kept out of the credit market. The credit shortage can best be overcome by greatly expanding, through some form of insured loans, the number of peasants eligible for credit.

Fruit Tree Productivity

Perhaps the second most serious problem within municipio agriculture is the failure of the fruit trees to produce well. As was mentioned in Chapter Five, the failure is attributable to serious neglect by the peasants.

This is most unfortunate in view both of the suitability of the trees to the region's climate and of Nealtican's proximity to the Puebla and Mexico City urban conglomerations. Furthermore, the fruit trees, planted in almost every field, constitute a significant land investment. If the trees could be made to produce well, a dramatic increase in village prosperity would ensue.

The solution to the problem does not require large inputs of capital or mechanized equipment. Three things are needed. The first is a qualified technician who can accurately diagnose the prevalent diseases and pests and instruct the villagers in proper tree care. The second is a ready availability of effective toxins. In the past, villagers have been sold insecticides which were ineffective. Lastly, financing is needed to provide wells and irrigation ditches, or to purchase water from tank trucks, for watering the trees during the dry spring.

Rodent Control

Rodents, and gophers in particular, frequently are responsible for the loss of over 20 percent of a peasant's corn and bean crop. The peasant can ill afford such a plague, but presently feels virtually helpless to deter it. Various solutions have been tried, including traps, poisonous bait, and firearms. Each is expensive, both in terms of time and money, and often ineffective. The villagers presently have all but given up the struggle, as is evidenced by the frequently voiced opinion that "the best thing to do is ignore them."

The problem can be overcome through assistance from a qualified technician and the availability of an effective control within the financial reach of the average citizen.

Animal Protein Supply

The typical Nealtican diet is deficient in animal protein. This includes meat, such as poultry, beef, and pork, and eggs and dairy products. The shortage of pork, beef, and milk is attributable principally to the poverty of the villagers, which restricts the availability of animal feed. The same cannot be said, however, for poultry, which requires considerably smaller quantities of feed. Every villager has endeavored, at some time, to raise chickens and/or turkeys. The birds are very subject to disease, however, and it is rare for one to survive a winter. Repeated failures have prejudiced the peasants against further efforts.

The failure of the poultry is a serious loss to the village. In addition to chickens being an excellent potential source of meat and eggs, their droppings are the preferred source of manure for the fields. The villagers presently pay $1800 pesos per six-ton truckload of chicken manure which is brought in from the state of Mexico. In addition to greatly improving dietary and agricultural conditions locally, a thriving poultry business would find a ready outlet for its surplus in Puebla city and its satellite towns.

Poultry culture will succeed in Nealtican as soon as diseases can be correctly diagnosed and effective medications to combat them can be provided at reasonable cost to the villagers.

Vegetable Production

Owing to the overriding importance of corn and dried beans, vegetables are not cultivated in the fields and do not form a part of the average diet. The only greens consumed by most villagers are cilantro (coriander) and alfalfa. Carrots, lettuce, tomatoes, green beans, peas, beets, summer squash, and all other vegetables are rarely eaten. Recently, the Mexican federal government initiated a program entitled Huerto Familiar (Family Garden) in an attempt to encourage families to sow home gardens. The prospects of implementing the Huerto Familiar program in Nealtican will be discussed at a later point in this chapter. Suffice it to say that the successful implementation of this program, combined with an increase in the villagers' protein intake, would go far toward providing a more balanced diet, which in turn would likely make a significant contribution to the health and work productivity of the peasants.

Corn and Bean Production

For the masses of poor villagers, an increase in corn and bean output will mean a greater dietary intake. For the wealthier peasants, it will mean a larger salable surplus. Tests by agricultural experiment scientists of the Plan Puebla (Puebla Plan) indicate that a maximum cost-benefit ratio is achieved with a corn plant production of 50,000 per hectare. By averaging 2.5 plants every 80 centimeters, Nealtican fields average 38,906 plants per hectare. Yields could be increased by over 30 percent through proper plant density.

Corn production could be nearly doubled by increasing the yield from one ear per plant, the present average, to two ears per plant. Currently, the vast majority of the plants produce only one ear. This trait is reinforced when the peasant, in selecting his seed for the following year, invariably chooses the largest ears. By planting seed taken only from two-ear plants, it is probable that the villagers could breed this characteristic into their native seed. The task, while seemingly simple, requires a rearrangement of the harvest and storage customs. To date, this has proven too difficult for the peasants.

A third means of augmenting corn yields would be through better, more efficient cultivation and weeding practices. This would require hand weeding the area immediately around the plants following each plowing, and killing the root as well as the tops of the weeds. The principal obstacles to the enactment of better cultivation practices are complacency and laziness. Most of the peasants, satisfied with the current size of the corn stalks, have adopted the attitude of "let good enough alone."

Other field tests by Plan Puebla personnel indicate that greater overall yields and profits are obtained by intercropping pole beans with corn in the same field, rather than by sowing only one or the other. The corn serves as a trellis for the bean plants, which fix nitrogen needed by the corn. However, owing to the survival instinct of the villagers, this suggestion has received very little support. One of the few serious threats to the corn is the summer winds, and the villagers believe that the weight of the bean vines would increase the likelihood of corn blow-downs.

Availability of Secondary Sources of Employment

In addition to the seven areas of needed agricultural improvement discussed above, the economy of the village would obviously benefit from an increased number of nonagricultural jobs. The likelihood of large industries and factories being established soon within reasonable commuting time of the peasants of Nealtican is remote. Perhaps the best means of providing the village with additional employment is the establishment of small business enterprises.

Three factors weigh against such projects succeeding. Firstly, the majority of the villagers have no previous business experience and would require on-the-job training in such aspects as accounting and marketing. Secondly, very few of the peasants have capital reserves sufficiently large to finance the initial expenses. Thirdly, the region in the immediate vicinity of Nealtican constitutes a relatively small potential market.

This is not to imply that small businesses could not succeed in Nealtican. On the contrary, many already exist and there is good potential for others, such as chicken raising. The existing enterprises, however, service only tiny segments of the village and most are of such a small scale that they do not even provide full employment for one farmer during the off season. In order to make a significant dent in the underemployment of the villagers, many larger establishments would be necessary and these would meet the obstacles outlined above. Even if the government or a private institution could provide sufficient credit to assist some of those capable of establishing businesses large enough to relieve the underemployment, and if a market for the goods could be found, the creditor institution would have to make the difficult decision of selecting which individuals would be fortunate enough to receive aid.

In conclusion, there appears to be no panacea to Nealtican's quest for secondary employment. It is likely that, as land pressure increases, little can be done (nor perhaps should be done) to prevent the future migration of the villagers in ever-increasing numbers to the nation's urban centers.

False Needs

Occasionally, development planners working in the less-industrialized nations assume that what is good for North American agriculture is automatically advantageous to the less-developed nations. It should be mentioned that there are four such false needs, whose introduction has or would prove counterproductive in Nealtican.

Mechanization

An analysis of Nealtican agriculture shows clearly the inadvisability of labor extensive agricultural methods in regions of surplus labor. North American and European planners of third world development have frequently been guilty of assuming that tractors and other mechanized farm implements are desirable additions and innovations in rural underdeveloped areas. In the case of Nealtican, this is precisely the wrong approach. Seasonal unemployment stands at 73 percent in spite of the fact that none but a few of the farmers utilize tractors.

Presently, there is only one tractor in the village. Ten or eleven years ago, the Mexican government, anxious to push "modern" agricultural technology, brought several tractors into the village, and staged demonstrations. The villagers were naturally impressed, both by the depth of the soil that was turned over and by the speed and convenience of the operation. One of the villagers, Gabriel Grande, was motivated to purchase a tractor which, to the present time, remains the only one in the village. Grande rents the tractor for $90 pesos per hectare. However, there are very few who avail themselves of its services, owing to poverty and the small-sized parcels of land. This is not to imply that the villagers would not prefer tractors to animal-drawn plows if circumstances permitted. On the contrary, they frequently meditate on how nice a tractor would be. If an outsider were to ask if more tractors are needed, most would respond yes. However, the negative social repercussions of such a development, measured in terms of increased idleness, would far outweigh the increased convenience. Emphasis should be placed on a greater, rather than lesser, utilization of human muscle power.

Hybrid Seed

Prior to 1969, the Rockefeller Foundation, through CIMMYT, the International Maize and Wheat Improvement Center located near Mexico City, contributed over U. S. $183,000 to Plan Puebla.[2] Since 1969, additional large outlays of cash to the program have been made by both the Rockefeller Foundation and the Mexican national government. One of the principal goals and alleged "accomplishments" of this effort was the development of a hybrid corn seed. The assumption underlying the effort was that the seed would result in greater yields than the local, or *criollo*, seed, and consequently the native peasant farmers would readily adopt the new variety. The seed was developed, but for numerous reasons has not been accepted by Nealtican farmers. The principal cause for rejection has been the relatively large cob and small kernels of the hybrid ears. This in effect means that an equal number of hybrid ears would yield less corn than *criollo* ears. Additional disadvantages of the hybrid plant are its shorter stalk which results in less animal fodder, the maturing of all ears at the same time, and the susceptibility of the ears to worm infestation. Most unfortunately, hybrid corn has a strange

---

taste to the villagers. Finally, owing to the absence in hybrid corn of a genotype that maintains itself over an indefinite period, the hybrid seed requires a much greater level of cooperation between the peasant and the government, to whom the peasant must return at least annually for a fresh supply.

Belatedly, Plan Puebla and other government officials have acknowledged that the criollo variety is, after all, the ideal seed for the local conditions. This does not mean, however, that the criollo yields cannot be increased through the steps outlined previously in this chapter.

Chemical Fertilizer

Plan Puebla extension efforts in Nealtican, as well as elsewhere throughout the Puebla valley, are committed to the use of chemical fertilizer. The normal procedure is for neighboring test plots to be grown utilizing chemical fertilizers of varying compositions. The mix which produces the best results is then recommended for use throughout the particular area. No mention is ever made of organic manure. This is attributable to a politically-based arrangement (política), out of the control of the local Plan Puebla officials, which permits only chemical fertilizer to be recommended to the campesinos. Most likely, underlying the initial decision was the assumption that "modern" chemical fertilizer must be superior to old-fashioned manure. However, as has been discussed previously, the sandy-textured soil and heavy summer rains of Nealtican render this hypothesis invalid. The Nealtican farmers realize it and so do the Plan Puebla personnel, yet the charade continues.

Improved Transportation Network

An essential element of most regional development schemes is an upgrading of the roads used to market the crops. Currently, there exist within the federal and state governments, plans to ultimately, but not immediately, pave the road from Cholula to Nealtican. This plan is part of a larger project to pave the old camino real, the route followed by Cortez on his conquest of Mexico, from Puebla to Mexico City. Rather than circumventing Popocatépetl and Iztaccíhuatl as the freeway connecting Mexico City and Puebla now does, the camino winds its way up the slopes to a point known as Paso de Cortez, crossing the divide within the low saddle connecting the twin volcanoes.

While paving the road will unquestionably result in increased national pride and an increase of tourism and eventually, perhaps, commerce and industry along the route, it will do nothing to immediately increase the exchange of goods between Nealtican and Cholula-Puebla. Presently, buses depart in each direction between the two points every 45 minutes, thereby providing adequate access to the urban markets. Even more importantly, perhaps, much of the agricultural surplus is sold by the Nealtican farmers to either fellow villagers in need, or to traveling merchants who drive their own trucks up to the village and load the produce while paying just slightly less than the going marketplace price in Cholula.

Factors Regulating the Diffusion of Agricultural Technology

Level of Wealth

Level of wealth is one of five important factors which regulate, or influence, the peasant's receptivity to agricultural innovations in

Nealtican. In Chapter Two, mention was made of the two conflicting schools of thought extant regarding peasant receptivity to innovation. One interpretation, advanced principally by Foster and Erasmus, holds that the scarcity of peasant resources leads to the adoption of societal attitudes and constraints which restrict individual initiative, and which render peasant society intrinsically noninnovative. The second viewpoint, propounded by Acheson, Huizer, and others, holds that blocks to development are primarily economic in nature, rather than cultural or cognitive and that, given the necessary resources and opportunities, peasants are willing innovators.

To test these two conflicting hypotheses, data were collected on individual peasant wealth and the following variables which were considered manifestations of peasant agricultural innovation: (1) use of pesticides and insecticides, (2) use of mechanized farm equipment, (3) sale of portion of harvest, (4) transportation of produce via gasoline-powered vehicles, (5) cultivation of nonsubsistence crops, (6) utilization of credit, and (7) participation in cooperatives.

It was hypothesized that if no significant difference was found to occur between amount of land owned and the innovation variables listed above, the cognitive viewpoint of peasant innovation would be substantiated. If, on the contrary, there were significant differences in innovative activity between economic classes in the village, the cognitive thesis would be rejected.

A random sample of one-third (226 individuals) of the peasant heads-of-households was taken. It was found that the average holding was 1.2 hectares. The peasants were then grouped into three classifications, poor (.01-1.0 hectare), average (1.1-2.0 hectares), and wealthy (more than 2.0 hectares), and their innovative activity compared by means of the Chi-squared Test. A null hypothesis that no relationship existed between level of wealth and innovative activity was tested for each variable and each was rejected at a 99.9 percent confidence level (Table 17). The cognitive explanation of peasant conservatism was therefore rejected. The level of peasant agricultural innovative behavior in Nealtican appears to be directly proportional to the level of peasant wealth.

Attitude Toward Outsiders

Receptivity to agricultural innovation in Nealtican is greatly influenced by the peasant's attitude toward outsiders, meaning anyone not from Nealtican or the surrounding rural region. The normal inherent attitude toward outsiders is one of distrust and suspicion. It has been created by centuries of exploitation of the peasants by urbanites and foreigners. The villagers came to know through sad experience that the only reason people ever visited the village was to take something that was not theirs, not to add to the village resources.

One still sees numerous examples of peasant exploitation, particularly within the framework of commercial transactions, where better-educated and more cunning urbanites shortchange the peasant for his produce and overcharge him for his purchases.

Three recent occurrences in Nealtican illustrate the severity of the latent distrust that the villagers harbor toward outsiders. The first occurred in 1973 when the operators of the Puebla-San Nicolás bus line, which connects Nealtican with Cholula, announced a doubling of the bus fares. The villagers became incensed and adopted the practice of

TABLE 17.--CHI-SQUARED ANALYSIS OF INNOVATIVE AGRICULTURAL BEHAVIOR

Item	Amount of land owned (hectares)				Totals	X^2	p	df
	.01-1.0	1.1-2.0	.01-2.0	>2.0				
1. Use Insecticides or Pesticides						16.37	.001	2
Yes	103	37		22	162			
No	58	4		2	64			
Totals	161	41		24	226			
2. Use Mechanized Farm Equipment						59.6	.001	2
Yes	6	7		14	27			
No	155	34		10	199			
Totals	161	41		24	226			
3. Sell Portion of Harvest						81.5	.001	2
Yes	11	20		21	52			
No	150	21		3	174			
Totals	161	41		24	226			
4. Transport Products to Market via Gasoline-Powered Vehicle						48.3	.001	2
Yes	6	11		12	29			
No	155	30		12	197			
Totals	161	41		24	226			
5. Sow Crops Other than Corn or Beans						50.5	.001	2
Yes	10	16		13	39			
No	151	25		11	187			
Totals	161	41		24	226			
6. Have Utilized Credit						25.5	.001	1
Yes			3	5	8			
No			199	19	218			
Totals			202	24	226			
7. Have Belonged to a Cooperative						45.8	.001	1
Yes			1	6	7			
No			201	18	219			
Totals			202	24	226			

Source: Author field survey.

boarding the bus but paying only the former rates. All the arguing in the world by the bus drivers and collection boys proved futile. The issue became so serious that the owners of the line agreed to attend a public meeting of the villagers at which time a compromise was worked out, and the village extracted an agreement from the outsiders never in the future to raise the fares without the prior consent of the village leaders.

The second incident, which also occurred in 1973, involved the district government in Atlisco which has jurisdiction over the lands in the southern section of the municipio. A decision was made in Atlisco to raise the annual land tax. When the tax collector arrived, he was met by an angry mob that ran him out of town and threatened to take his life. The Atlisco bureaucrats relented and the old rate of $20 pesos per hectare is still in effect.

The final incident occurred in the winter of 1974-1975. A rumor arose in Mexico City that a large number of Japanese had infiltrated the federal district with the intention of sterilizing the youth. About a month later the rumor reached Nealtican and surrounding villages, where it was said that the sterilization was being effected by drawing fluid with a syringe from a girl's umbilicus and from a boy's penis. Panic swept through the village and the parents converged one morning on the public grade school which had become the object of suspicion since it is the primary outpost of outside influence in the village. The parents forced the closure of the school and it was several days before a semi-calm was restored. Many of the parents were never satisfied that a conspiracy did not exist, and later refused to let public health nurses sent from Cholula innoculate their children against polio, measles, and other diseases.

These three incidents, and numerous others which continuously occur in the village, illustrate the deep latent peasant suspicion of outsiders, which distrust is a factor influencing receptivity to agricultural innovation. In this regard, the following gauges of the amount of outside contact are useful in assessing the level of peasant distrust of outsiders: (1) literacy and amount of reading, (2) amount of radio listening, (3) amount of television viewing, (4) frequency and extent of personal contact with outsiders, measured both in trips outside the village and in visits of outsiders to the village, and (5) amount of assistance or aid received from outsiders.

Ability to Cooperate

A third factor which regulates peasant receptivity to innovation in Nealtican is the villager's ability to cooperate with others and to function as a contributing member of a group. Many innovations are available to the farmer only through cooperatives or groups. These include wells bored through private cooperatives, soil testing and productivity recommendations made possible through membership in the Plan Puebla, and a wide range of aids offered by the Mormon church to its members.

Peasant personality in Nealtican tends to be individualistic. The Nealtican peasant, as that of southern Italy, is characterized by what Edward Banfield calls "amoral familism," a condition in which the individual tries to "maximize the material, short run advantage of the nuclear family" and assumes "that all others will do likewise."[3]

The low level of community cohesion in Nealtican is manifested most vividly in the political life of the village. The pride manifested in

---

the villagers over the absence of ejidos in the municipio is a significant indicator of the importance placed on individual freedom.

A second indicator has historically been the inability of the ruling political faction effectively to control and to maintain order in the village. From 1944 to 1972, the village was ruled by the CROM. During this era, the community averaged three to four political killings a year. Between 1945 and 1955, the rivalry became so intense that the village resembled a state of seige. Reliable informants estimate that ten to fifteen men were assassinated each year, and the situation deteriorated to the point that "one couldn't leave home in the dark."

A turning point was reached in 1972 when the CROM candidate for municipal president was elected "by decree" and installed in power. The man had been accused previously of ordering political killings (which he strenuously denies) and the thought of him serving three years as president was too much for the CNC supporters. A large group of villagers stormed the palacio municipal and threw the president and his associates in prison, where they narrowly escaped death by gasoline bombs. A CNC man was installed as president and held office until 1975 when another CNC candidate was peacefully elected.

To the present time, great bitterness exists between the rival factions. The CROM members point out that almost all the town's "improvements," such as electricity, the school, the post office, and the capped well, were accomplished while the CROM was in power. They accuse the CNC of being a do-nothing, antiprogress party. The CNC members respond that they also favor municipal improvements, but intend to achieve them without levying large assessments on each household as did the CROM. The CNC also accusses the CROM leaders of using the assessments to enrich themselves.

As a consequence of this bitter rivalry, villagers have very little respect at present for the rule of law. An order from the municipal president will be obeyed only if one agrees with it. The concept of subordination of personal desires to the good of a group is not enforced. Freedom is valued more than order. Politically, the village exists in a power vacuum in which each person pursues his struggle to survive as best he can.

Ability to Follow and Implement Instructions

The fourth factor which influences peasant receptivity to agricultural innovations is the ability of the peasant to follow and implement instructions. This in turn is often a function of the leadership ability of an individual. Innovations generally require more hard work, more precise knowledge, and a capacity for scheduling greater than that required to maintain the status quo. A peasant who can comprehend the rationale behind the preconditions of an innovation is much more likely to adopt and succeed at an innovation than one who cannot. In this regard, literacy level, while not infallible, is a valuable indicator of an ability to follow and implement instructions. A more reliable indicator would be some "leadership quotient" measure, which would combine such attributes as intelligence and learning ability, ambition and foresight, emotional stability, organizational ability, and efficiency.

Applicability of the So-Called "Innovations"

The fifth factor which regulates acceptance of agricultural innovation in Nealtican is the ultimate value, or applicability of the innovation itself. Is the "innovation" an improvement over preexisting conditions? If so, is the effort and cost required to institute and maintain the innovation worth the improvement achieved? If the answer to these two questions is yes, then the innovation very likely will be adopted. If, however, the answer to either question is no, the innovation has little chance of succeeding.

The example of the Plan Puebla

The experience of the Plan Puebla demonstrates very well both the importance of the applicability of agricultural innovations and why peasants of the less-industrialized nations so frequently reject what appear to the industrialized nations to be potentially beneficial technologies.

The Plan Puebla was formed in 1967 as an agricultural extension service dedicated to furthering the adoption of modern agricultural technologies throughout the Puebla valley. It was originally funded and directed by the Rockefeller Foundation through CIMMYT. In February, 1974, the former ties with CIMMYT were dropped and the Plan affiliated with the National School of Agriculture at Chapingo, state of Mexico.

Presently, the Plan Puebla is concerned with helping subsistence maize farmers to improve yields. The Puebla valley is divided into five zones, each administered by a técnico (technician) who is aided by three or four promulgores (extension agents). Each of the promulgores is responsible for the program in eight to ten villages. Miguel Sánchez Hernández, director of Zone III of which Nealtican is a part, candidly admits that, to date, the program has failed in the village. He attributes its failure to negative experiences of the villagers with the program. Specifically, the Plan initially tried to push the hybrid corn seed developed by the Rockefeller personnel. For numerous reasons

---

discussed previously, the seed was judged inferior by the Nealtican peasants to their local criollo seed. This experience severely damaged the credibility of the Plan in the village. The Plan personnel have now recognized the error and advocate use of the criollo seed, but it is too late to regain the confidence of many of the farmers.

A second, ongoing error of the Plan is its insistence that the villagers use chemical fertilizer. Señor Sánchez admits that organic manure is better, but explains that, owing to the política, he is not free to recommend it publicly. Consequently, the Plan continues to lose face in the village by recommending an inferior product.

A third stumbling block to the institution's success in Nealtican is the crop insurance program. In order to belong to the Plan, the peasants must purchase insurance for their crops at a cost of $36 pesos per $1600 pesos of insurance. This is all seemingly well and good, but the problem arises when, after a peasant loses all or part of his crop, the insurance prorates its payment. To illustrate, suppose a peasant loses half his corn crop. Rather than pay the peasant the full value of his losses, the insurance would reason that, since half the crop was lost, only half of the 1600 pesos will be paid. This arrangement is obviously unfair to the peasant, and he knows it. While the insurance is not offered through the Plan Puebla, it is a requirement for membership in the program. Consequently, the peasants make the logical decision not to join.

The lack of applicability of the "innovations" promulgated by the Plan is the primary reason for its failure in Nealtican. This is particularly regrettable because the failures have prejudiced the villagers against many of the worthwhile suggestions of the Plan discussed earlier in this chapter.

The example of the Huerto Familiar program

A final illustration of the critical importance of innovation applicability can be found in the experience of the Huerto Familiar (Family Garden) program in the village. The program is not new, having been first established by the federal government in the 1960's. Its purpose is to achieve a better-balanced diet for the villagers by augmenting the intake of fruits and vegetables. The original designers of the program, recognizing the obvious, divided the nation into three climatic zones: tierra caliente (hot lowlands), tierra templada (moderate middle elevations), and tierra fría (cold uplands). A year-long calendar is prepared for each climatic zone, on which the peasant is instructed on which exact day to plant a given vegetable and to harvest it. Additional helpful hints dealing with varying aspects of agriculture are provided on the back sides of each page.

The Nealtican villagers have been assigned to the temperate zone, and for $90 pesos, can purchase a calendar and a box which contains one seed package of each of the following: green beans, spinach, beets, green onions, broccoli, two varieties of tomatoes, turnips, green chilies (jalapeño), carrots, red radishes, cucumbers, white radishes, chili cotaxtla, peas, zucchini squash, cantaloupe, two varieties of lettuce, cabbage, and cauliflower.

In spite of the worthwhile objectives of the program, it has met with almost total rejection. The program is naive to expect both weather and crops to conform to a rigid schedule. Some villagers blame their rejection of the program on the lack of suitability of some of the crops, such as cantaloupe and cucumbers, to the local climate. The principal problem, however, is the lack of suitability of vegetable gardens and their cultivation to the region. The vegetables would most likely be grown during the dry winter season when the land is not sown in the more essential corn and beans. Consequently, irrigation water would be needed but is unavailable. An equally serious obstacle is the lack of a garden tradition among the villagers. Owing to the dispersed pattern of fields surrounding the nucleated village, those farmers who have experimented with the program have been unable to guard the vegetables and have experienced high losses to thievery. A possible solution to these problems would be for the villager to plant his garden within the guarded walls of the family compound which, incidentally, would also increase the likelihood of obtaining irrigation water from the village's ditches. While such a plan could conceivably work, it would require a major alteration of the living patterns within the compound. Horses, donkeys, pigs, and poultry would have to be corralled in one section of the compound away from the garden rather than be allowed to roam freely as at present. The children would have to do much more of their playing out of mother's sight. In addition, it is likely that an intolerable increase in demand for water within the village would occur.

Notes

[1] In order to establish a well cooperative, the following steps are necessary: (1) file a proposal, which must include a detailed map of the area to be serviced by the proposed well, with the Secretaría de Agricultura y Ganadería, (2) file a proposal with the Secretaría de Recursos Hidráulicos, (3) convince a commercial bank of the project's worth and obtain the necessary credit, (4) return to the Secretaría de Agricultura y Ganadería with the necessary papers and money, after which the Secretaría will dig the well, (5) arrange with a private commercial business to install the pump, (6) arrange for and supervise the digging and lining of the irrigation ditches, (7) arrange for the electrical hookup to operate the pump, (8) supervise the collection of monthly service charges and annual installment payments for the cooperative members, (9) coordinate the scheduling of water turns, and (10) maintain the well, pump, and ditches in operable condition.

[2] Interview with Miguel Sánchez Hernández, Director of Zone III, Plan Puebla, Puebla, Puebla, February 20, 1975.

[3] Banfield, p. 83.

CHAPTER TEN

RELIGIOUS AFFILIATION AND AGRICULTURAL TECHNOLOGY

The Impact of Protestantism on Factors Regulating the Diffusion of Agricultural Technology

Ability to Cooperate

The ability to cooperate is an asset to a Nealtican farmer endeavoring to innovate in his agricultural technology. Cooperation in agriculture implies four prerequisites. The first is trust in the integrity and motives of one's associates. The second is a desire for the rewards of cooperation. The third is the existence of an organization which exercises control over the individual members of the cooperative for the good of the whole. The fourth is a willingness of the individual member to subordinate many of his personal desires and aspirations to the good of the group.

All of these prerequisites run counter to the experience and worldview of the average Nealtican peasant, whose personality is characterized by amoral familism. Such a person assumes that the integrity and motives of his associates are not to be trusted. Consequently, his first reaction is to oppose the formation of any organization which has the potential to limit his choice of options. Such a peasant always holds his personal aspirations to be more important than the "public good" and will cooperate only as long as the group supports his viewpoint. It is thus very difficult for him to envision any advantages accruing from membership in a cooperative.

Amoral familism has acted to restrict cooperative effort in Nealtican to three activities, two of which do not receive the full support of the villagers. The first is the annual corn harvest, or _pizca_. It is customarily accomplished through a cooperative work party, or _faena_, in which the members of one's extended family help harvest a peasant's field with the understanding that the act will be reciprocated. The _faena_ custom is consistent with amoral familism because it utilizes only members of one's family. The second traditional cooperative effort is the annual cleaning of the community's irrigation ditches. Each family that has an able-bodied adult male is expected to contribute six to ten hours of labor to the effort on a specified day of the year. This seemingly simple assignment is so poorly supported by the villagers that much of the appointed day is spent bickering over what penalties to impose on those who have not participated. The third cooperative effort, the Saint Bonaventure celebration in July, requires no work, only a ten-peso contribution, yet a fourth of the Catholics refuse to cooperate to this meager extent.

Protestant membership ameliorates peasant reluctance to cooperate. Owing, perhaps, to their minority status, Protestants have found that cooperation and unity are necessary for survival and progress. Furthermore, participation in the lay religious hierarchy provides a training ground for functioning within a social organization and for subordinating one's personal preference to the good of the entity.

Protestant theology also builds trust in one's associates. Unlike their Catholic neighbors, most of whom have not heard a sermon in years, Protestants are exhorted weekly to practice the Christian principles of integrity, honesty, and love of neighbor. They are constantly reminded of the spiritual brotherhood of man. Protestant doctrine stresses the innate goodness of mankind. The Mormons and splinter-Mormons extend these concepts and teach that each man, regardless of his present state, has the potential to eventually develop into a god. From a motivational point of view, these teachings tend to uplift. They reinforce the conviction that man can be trusted. This concept is the antithesis of that produced by the culture and everyday experiences of the typical peasant.

Owing, then, to the Protestant training and experience in working within social and organizational restraints, and to the Protestant trust in mankind, non-Catholics in Nealtican have historically demonstrated a greater proclivity to participate in cooperatives than their religious counterparts. One manifestation of this occurred in 1957 when ten villagers joined to form a credit group with the Puebla branch of the Banco de Crédito Agrícola. It is noteworthy that four of the ten partners, including the leader of the group, were non-Catholics.

A second manifestation of high participation in cooperatives by Protestants occurred in the mid-1960's when the original L.D.S. welfare farm was established. Later, in 1972, when the single Mormon branch was divided into two, a second welfare farm was formed. All of the labor on these farms is voluntary. The farms have been very successful, and profits derived from the sale of the produce are sent to Puebla each year. The Catholic community in the village has never successfully operated any cooperative land.

A third manifestation is the fact that the village's only well cooperative was formed and continues to be operated by a Protestant. The Mormon experience in cooperation has been so positive that tentative plans are now being laid for the establishment of a cooperative store.

At present, the idea is only in the discussion stage and it may never become a reality. Nevertheless, it is apparent that the Protestant community has advanced far beyond the Catholic in cooperative economic effort.

At present, the Plan Puebla is the greatest cooperative effort in the village and also the source of numerous agricultural innovations. Statistical analysis of the comparative Protestant and Catholic participation rates in the Plan indicates that Protestant affiliation is significantly greater ($p = .001$, Table 18). It is likely that both the Protestant and Catholic participation rates would be higher if the Plan were to divest itself of the liabilities discussed in Chapter Nine.

Ability to Follow and Implement Instructions

Agricultural innovation often requires considerable knowledge and ability. In order to participate in the Plan Puebla, for example, a peasant must have all the papers to his land in order, then petition for membership, purchase crop insurance, and follow instructions regarding the use of chemical fertilizer. In years past, when the hybrid seed was being pushed, participation in that "innovation" required the implementation of a wide range of changes. Today, if a villager hopes to implement the Huerto Familiar program, he is encouraged to follow a very rigid time schedule. Participation in a water cooperative also demands scheduling and a degree of timing to which the peasant is unaccustomed.

Protestant membership increases in two ways the villager's ability to follow and implement instructions. The first is through increasing the functional literacy of the peasant. A farmer's ability to innovate is often contingent upon his ability to read. Protestantism places great

TABLE 18.—CHI-SQUARED ANALYSIS OF PARTICIPATION IN AGRICULTURAL INNOVATIONS

Item	Yes	No	Totals	X^2	p	df
Have used credit						
Catholics	2	191	193			
Non-Catholics	4	29	33			
Totals	6	220	226	13.31	.001	1
Have used mechanized tools						
Catholics	17	176	193			
Non-Catholics	10	23	33			
Totals	27	199	226	12.39	.001	1
Participation in the Plan Puebla						
Catholics	3	190	193			
Non-Catholics	5	28	33			
Totals	8	218	226	15.26	.001	1
Have ever used hybrid corn seed						
Catholics	0	193	193			
Non-Catholics	1	32	33			
Totals	1	225	226	5.87	.025	1
Have ever used insecticides						
Catholics	136	43	179			
Non-Catholics	27	5	32			
Totals	163	48	211	1.09	.50	1
Have ever used pesticides						
Catholics	2	191	193			
Non-Catholics	1	32	33			
Totals	3	223	226	.83	.50	1

Source: Author field survey.

stress on reading, for without knowing how to read, one cannot study the scriptures, prepare his Sunday School lesson, or fill out a monthly report. Consequently, illiterate converts soon feel great pressure to learn to read, and most find a way to learn, even if they have never attended school previously. An analysis of comparative Protestant and Catholic literacy rates indicates that the former are significantly greater (p = .001, Table 19).

The Protestant groups, with their emphasis on lay clergy, also provide greater opportunities for the peasant to develop his leadership qualities. In fact, all who actively participate become leaders of some group. Many times a villager is "called" by higher authorities to a position for which he is not yet totally prepared. Most will accept the calling in the spirit of "I'll do my best" and through long effort eventually achieve proficiency in reading, budgeting, planning, reporting, and other necessary skills. Often without realizing it, the peasant's ecclesiastical efforts have resulted in his becoming much more capable of effecting agricultural innovations. There is a great contrast, for example, between a man who joins a Protestant body as a timid, functionally illiterate peasant, and the same individual, perhaps 15 years later who, after progressing up the ecclesiastical hierarchy, has presided over 200 fellow members for a period of time. Such an individual is, in many ways, an executive and entrepreneur, although in many cases still trapped in his poverty.

Attitude Toward Outsiders

A villager's attitude toward outsiders, or nonpeasants, is critical to his willingness to experiment with agricultural innovations. An essential prerequisite of innovation is trust. Bitter experience has

TABLE 19.—CHI-SQUARED ANALYSIS OF EXPOSURE TO OUTSIDE INFLUENCES: LITERACY, READING, RADIO, TELEVISION, AND TECHNICAL AID FROM CHURCH

Item	Criteria				Totals	X^2	p	df
Literacy rates		Literate	Illiterate					
Catholics		115	78		193			
Non-Catholics		30	3		33			
Totals		145	81		226	12.02	.001	1
Reading frequency	Daily	Weekly	Monthly	Monthly				
Catholics	8	38	24	45	115			
Non-Catholics	23	6	1	0	30			
Totals	31	44	25	45	145	71.45	.001	3
Read regularly	Books	Magazines	Newspapers	Bible				
Catholics	57	35	46	20	158			
Non-Catholics	30	9	14	30	83			
Totals	87	44	60	50	241	21.55	.001	3
Radio listening		Daily	Weekly or Less					
Catholics		48	28		76			
Non-Catholics		24	1		25			
Totals		72	29		101	9.91	.005	1
Television viewing		Daily	Weekly or Less					
Catholics		1	3		4			
Non-Catholics		6	1		7			
Totals		7	4		11	4.05	.05	1
Have received technical aid from church		Yes	No					
Catholics		1	192		193			
Non-Catholics		6	27		33			
Totals		7	219		226	29.30	.001	1

Source: Author field survey.

taught the peasant to distrust the motives of all outsiders. Protestantism tend to ameliorate, or eliminate entirely, the traditional peasant distrust of outsiders. A local Mormon leader phrased it: "The Gospel civilizes a little" (el evangelio civiliza un poco). This "civilizing" is accomplished through the doctrinal teachings discussed earlier in this chapter and, just as importantly, through providing repeated positive contact experiences with outsiders.

Often, doctrine and outside contact are combined. At the quarterly Mormon stake conference held on April 19 and 20, 1975, for example, the first counselor to the stake president exhorted the members who were farmers to use the best agricultural techniques and to make their lands yield as much as possible. Such an exhortation becomes, in effect, doctrine and policy for the Nealtican members.

The extent of peasant contact with the outside world is a good indicator of attitude toward nonvillagers. Statistically significant findings indicate that literate Protestant peasants read much more often than do literate Catholic peasants ($p = .001$, Table 19). Protestants and Catholics also tend to stress the reading of different types of material. The former read the Bible and other books most often, followed by newspapers and magazines, in that order, while the latter prefer to read books other than the Bible, then newspapers, then magazines, and lastly, the Bible ($p = .001$, Table 19).

Non-Catholics who own radios and/or television sets also avail themselves more of these media than do their Catholic counterparts ($p = .005$ for radio listening, and $p = .05$ for television viewing, Table 19).

Yet another indicator of the amount of outside contact is the frequency of trips outside the village. It was found that the Protestants leave the village more often ($p = .001$, Table 20). The non-Catholic peasants also tend to travel longer time-distances, showing a greater proclivity to shop regularly in Puebla or Atlisco than the Catholics whose most frequent destination is the smaller, closer city of Cholula ($p = .001$ for all trips, and $p = .05$ for shopping trips, Table 20). It is valuable to note, however, that both religious groups purchase food from the same source; the marketplace or one's own harvest still serve as the exclusive sources for 222 of the 223 peasants interviewed ($p = .75$, Table 20).

In addition to the amount of contact generated by villagers leaving the community, contact can also be generated through visits to Nealtican by outsiders. In this respect, Protestant villagers have been exposed to much greater quantities of foreign influence than have their Catholic counterparts. Except for the sporadic visits of the Catholic priest, which directly affects only a few and which results in no new infusion of foreign ideology, Catholic peasants have no religious-based foreign contact within the village.

In contrast, the Protestants, and particularly the Mormon community, have received considerable in-village outside contact. The most spectacular way this occurs is the visit of an apostle or other general authority from Salt Lake City. This has happened on two occasions. The first was at the dedication of the L.D.S. chapel in 1961, and the second was a spur-of-the-moment visit by an apostle in February, 1975. In the former case, over 600 persons gathered, and in the latter, with less than two hours' advance notice, attendance was over 300. Such events can

TABLE 20.—CHI-SQUARED ANALYSIS OF OUTSIDE INFLUENCE: TRIPS OUTSIDE NEALTICAN

Item	Criteria				Totals	X^2	p	df
Frequency of trips outside Nealtican		Weekly or more	Monthly	< Monthly				
Catholics		44	93	56	193			
Non-Catholics		20	12	1	33			
Totals		64	105	57	226	22.59	.001	2
Most common destination		Cholula	Puebla	Atlisco				
Catholics		159	35	6	200			
Non-Catholics		20	12	7	39			
Totals		179	47	13	239	19.81	.001	2
Most frequent shopping trip destination	Cholula	Puebla	Atlisco	Nealtican				
Catholics	83	31	10	85	209			
Non-Catholics	13	11	6	15	45			
Totals	96	42	16	100	254	8.04	.05	3
Source of food consumed		Supermarket	Market or own harvest					
Catholics		1	189		190			
Non-Catholics		0	33		33			
Totals		1	222		223	.17	.75	1

Source: Author field survey.

be likened to the visit of an archbishop, a cardinal, or the Pope to the Catholic community. The great attendance is indicative more of a desire to see a dignitary in person, and perhaps to receive a spiritual blessing, than to learn something new. Such events do serve, however, to weaken peasant distrust of outsiders. Unlike the Catholic community, Nealtican Protestants constantly receive visits from outsiders, mostly native Mexican church authorities from Puebla city or elsewhere.

In addition, the Mormon villagers have been the recipients of two other powerful influences for agricultural innovation. The first is a group of Brigham Young University students who, commencing in 1971, began visiting the village each spring as part of a program entitled "Project Mexico." The goal of the program is to raise the level of living of church members in Mexico. In the early years of the effort, a certain number of students were assigned to reside temporarily with church members in a particular village or city. More recently, a team concept has been instituted where each member acts as an expert in a given area and visits a number of communities teaching that particular skill. Some of the subjects taught by the students in 1975 included sewing, nursing, sanitation, home construction, youth "leadership," music, food storage and preservation, nutrition, agriculture, recreation, and genealogical research.

Measured in terms of changing members' lives, the success of the Project Mexico has been limited. The few weeks that the students are in the country, their poor Spanish, the time taken to be tourists, and their own lack of mastery of the skills they are teaching often prevent them from realizing changes. Furthermore, the students come at the busiest time of the year, the spring planting season, and many Nealtican members who would like to learn simply cannot commit the necessary time. For all these reasons, local church leaders estimate that only half of the village members have ever participated in Project Mexico. The percentage who have gained beneficial agricultural knowledge is considerably lower, probably not amounting to over 5 percent of the adult male members.

In spite of these weaknesses of the program, it is a success in many ways. Primarily, it demonstrates on an annual basis to the village Mormons that outsiders do sincerely care about their welfare. Strong bonds of affection are developed between villagers and the students. Furthermore, a limited number of members have been assisted, particularly in the areas of home food preservation and storage, nursing, sewing, and nutrition.

The second, and most direct, outside influence for agricultural innovation has been the efforts of Kirk Olson. Olson was hired by Brigham Young University some five years ago to act as a resident agricultural extension agent to L.D.S. members residing in the villages and cities of the Puebla valley. Working out of Puebla and Atlisco, his efforts in Nealtican have included the introduction of domesticated rabbits, staging a demonstration field plot utilizing modern technology, the introduction of a new variety of apple trees, and the teaching of fruit tree care, pruning, and grafting.

None of Olson's efforts has resulted in any direct material benefit to the L.D.S. villagers or in the adoption of new agricultural technologies. The introduction of domesticated rabbits was started with one farmer, who was provided free cement and wire pens built by Project Mexico students. Owing to the villager's ignorance of rabbit culture, however, the demonstration has not been a success. Human errors, the high cost of feed, and government-regulated meat prices have resulted in the operation running in the red. Needless to say, this is not a good way to have the innovation diffuse. Nevertheless, the concept is so tempting, owing perhaps to the villagers' difficulty with poultry culture, that five other L.D.S. farmers have purchased rabbits. The principal obstacle to successful rabbit culture in the village is poverty; the farmers cannot afford to eat that much meat themselves and yet cannot find profitable market outlets.

Olson's efforts at fruit tree dissemination have also met with limited success. He donated four or five young apple trees to each of four villagers, but not enough time has elapsed for the trees to start bearing fruit. It is likely that when the time does arrive, their output will be meager, for the peasants, in spite of Olson's teaching efforts, have either not learned or not developed the discipline necessary to prune and care for the trees properly.

The demonstration field plot also failed, principally because of Olson's and his assistants' lack of understanding of local agricultural conditions. Considerable fanfare accompanied the effort, and several agricultural technicians from Brigham Young University were brought down to ensure success. The plot was set up on land owned by one of the local church leaders. Hybrid sweet corn was planted, and also numerous "new" crops, including soybeans, bulb onions, carrots, red radishes, lettuce and beets. All but the radishes did miserably. The soybeans were eaten by wild rabbits, the corn grew only one meter high and yielded virtually nothing, the onions grew to only one centimeter in diameter, and the carrots, lettuce and beets did equally poorly. In retrospect, it is obvious to the villagers that the project was destined to fail.

They explain that the plot was planted too late, in June after the rains had already commenced, that the chemical fertilizer was washed out of the soil by the rains, that it was too close to the monte, or hill country, where rabbits are uncontrolled, and that the vegetable crops were not hardy enough to thrive without irrigation.

In spite of these failures, Protestants in Nealtican, owing to their conviction that many outsiders are sincere in their intentions to assist, continue to maintain a willing attitude toward possible future experimentation with agricultural innovations. This is reflected in the statistically significantly higher ratio of Protestants over Catholics who have received technical aid through their church ($p = .001$, Table 19).

Level of Wealth

In Nealtican, wealth can best be measured in terms of amount of land worked. In this respect, Protestants are considerably wealthier than Catholics. The average Protestant worked 2.31 hectares of land during the 1974 growing season while the average Catholic worked 1.06 hectares of land. This difference is statistically significant ($p = .001$, Table 21). The fact that Protestants obtain more of their land through purchase and as loan collateral than do Catholics, indicates that larger initial inheritances is not an adequate explanation of the phenomenon (Table 3). The greater land wealth of the Protestants has also resulted in greater Protestant ownership of stoves, sewing machines, television sets, and radios ($p = .001$, Table 21).

The wealth difference is also manifested in the diets of the two religious groups ($p = .001$, Table 22), including consumption of high protein food such as eggs, milk, and meat ($p = .001$, Table 22). The

TABLE 21.--CHI-SQUARED ANALYSIS OF WEALTH

Item	Criteria					Totals	X^2	p	df
	Land in hectares								
Amount of Land Worked, 1974	.01-.25	.26-.50	.51-1.00	1.01-2.00	>2.01				
Catholics	40	60	50	33	10	193			
Non-Catholics	1	3	7	8	14	33			
Totals	41	63	57	41	24	226	47.68	.001	4
Ownership of Stoves		Yes		No					
Catholics		5		188		193			
Non-Catholics		7		26		33			
Totals		12		214		226	19.44	.001	1
Ownership of sewing machines		Yes		No					
Catholics		45		148		193			
Non-Catholics		20		13		33			
Totals		65		161		226	19.13	.001	1
Ownership of television sets		Yes		No					
Catholics		5		188		193			
Non-Catholics		7		26		33			
Totals		12		214		226	19.44	.001	1
Ownership of radios		Yes		No					
Catholics		81		112		193			
Non-Catholics		26		7		33			
Totals		107		119		226	15.32	.001	1

Source: Author field survey.

lack of difference between the two groups in terms of use of canned foods (p = .50, Table 22) reflects the near total absence of these products in the local culture.

Protestants place a greater emphasis on education than do Catholics. In 1975, for example, of 17 village youth attending secondary or high schools, 14 were Protestants. This is a partial explanation, perhaps, of the Protestant leadership in the nonagricultural sector of the economy which, in turn, contributes to the greater Protestant wealth. Seven of the nine village tailors, the only ironsmith, the only two mechanics, the only person who claims to be a veterinarian, the only radio repairman, three of the six owners of large stores, the operator of the air compressor, and one of the three tortillería owners are all Protestant. With the exception of the ironsmith, all are natives of the village who have acquired and continue to practice their skills while continuing their primary occupation of farming.

A second possible reason for the greater Protestant wealth is the emphasis placed on avoidance of such expensive habits as smoking and drinking. Perhaps the most powerful explanation of Protestant wealth, however, lies in the training which is inherent in church membership and lay ecclesiastical positions. The typical Catholic villager, for example, has absolutely no concept of the need for, or how to make, a family budget. His financial transactions are controlled entirely by the exigencies of the moment. In contrast, the Protestant, by virtue of his allegiance to the payment of tithing, has no choice but to budget his income. Furthermore, Protestant wives, through their added training in sewing, nursing, and food preservation, are prepared to save large sums of money.

TABLE 22.--CHI-SQUARED ANALYSIS OF REGULAR DIET

Item	Criteria				Totals	X^2	p	df
Diet content	Corn & Beans	Eggs	Milk or Meat	Canned Food				
Catholics	193	33	10	13	249			
Non-Catholics	33	22	16	4	75			
Totals	226	55	26	17	324	39.59	.001	3
Egg consumption	Corn & Beans	Eggs						
Catholics	193	33			226			
Non-Catholics	33	22			55			
Totals	226	55			281	18.13	.001	1
Milk consumption	Corn & Beans	Milk						
Catholics	193	3			196			
Non-Catholics	33	6			39			
Totals	226	9			235	16.95	.001	1
Meat consumption	Corn & Beans	Meat						
Catholics	193	7			200			
Non-Catholics	33	10			43			
Totals	226	17			243	21.23	.001	1
Canned food consumption	Corn & Beans	Canned Food						
Catholics	193	13			206			
Non-Catholics	33	4			37			
Totals	226	17			243	.98	.50	1

Source: Author field survey.

Any of these factors, coupled with the Protestant stress on thrift and excellence, could be sufficient to make the difference between financial success or failure in a given year. Over the course of time, it appears that these factors, combined with Protestantism's historical attraction of the young and ambitious, have produced a Protestant community that is significantly wealthier. At present, both the Protestants and Catholics are unaware of this fact. This is attributable to the tendency of the villagers to try to appear as common and ordinary as possible in public. Consequently, the villagers tend to have very little knowledge of others' wealth, even those of their same faith.

Religious Affiliation and Agricultural Innovation

Owing primarily to their greater wealth which permits them to afford the risks of innovation, and secondarily to their proclivity to join cooperatives, their greater ability to follow and implement instructions, and their greater receptivity to ideology originating without the village, Protestants in Nealtican are more receptive than Catholics to agricultural innovation. This is manifested, however, only when the proposed innovation is perceived as truly beneficial.

Protestants reported a statistically significant higher use of credit and tractors than did Catholics ($p = .001$, Table 18). Reference has already been made to greater Protestant participation in the Plan Puebla. Protestants have also been more willing to experiment with hybrid seed ($p = .025$, Table 18), although the unsuitability of this product has resulted in its being totally ignored at present. In like manner, there is no significant difference between Protestant and Catholic utilization of pesticides ($p = .50$, Table 18), or insecticides (p = .50, Table 18), owing to the lack of need for the former, and to the ineffectiveness of the latter. In short, agricultural innovation in Nealtican is a function of religious affiliation.

CHAPTER ELEVEN

RECOMMENDATIONS AND CONCLUSIONS

Recommendations

One of the most striking features of Nealtican is its totally agrarian environment. With a population of 7,000, it is very likely one of the largest peasant communities in Mexico. This phenomenon can best be explained in terms of tradition and relative location. The peasant-urban market relationships which currently prevail among the villagers are a carry-over from the past when the community was too small and too poor to support large commercial establishments. Since the Revolution, however, the population of the village has more than tripled, and its poverty has lessened. If the population had grown and the market distance had remained constant, Nealtican very likely would have experienced the establishment of numerous commercial outlets. This has not been the case, however. Instead, the population grew as the distance diminished, both through improved transportation and through westward expansion of the Puebla-Cholula urban zone. Thus, increased accessibility to urban markets offsets the population growth and contributes to a maintenance of the community's peasant status.

Nealtican cannot realistically be expected to continue much longer as a purely peasant village. Already over half the villagers report that they frequently shop for groceries at the small village stores. It appears to be just a matter of time before an individual with both the necessary financing and vision opens a permanent shoe or clothing store, small restaurant, or other commercial enterprise in the village. It is likely that, once this occurs, numerous others will follow and Nealtican will evolve into a town. Such a change would, of course, mark the end of the traditional peasant society of the village.

A future study could very profitably concentrate on the economic, educational, social, and religious adjustments which will occur within the village as it evolves into an integrated society. It will be interesting to see if the current Protestant leadership in the incipient nonagricultural sector of the economy leads to future Protestant dominance of commerce and trades.

Future studies of the village should also concentrate on its changing relationship with nearby towns and villages. Historically, Nealtican has ranked among the smallest and least important of the region's settlements. Its recent growth, however, has already enabled it to surpass in population San Gregorio Atzompa, San Jerónimo Tecuanipan, Santa María Acuexcómac, and San Juan Tianguismanalco, and it is likely to pass San Nicolás de los Ranchos and Calpan within ten years. With its added size, Nealtican could conceivably develop into a regional center on the order of Huejotzingo.

With Nealtican's additional political and commercial influence, it will also become worthwhile to study the diffusion of Protestantism from Nealtican to surrounding settlements. Already, Nealtican ranks as the Protestant headquarters for the region which includes all of the above-mentioned communities. Will Nealtican Protestants use the influence accruing from the increasing power of the village to further their proselyting efforts and, if so, with what results?

Emilio Willems, in his analysis of the growth of Protestantism in the cities of Brazil and Chile, concluded that Protestant membership often brings increased prosperity.[1] Robert Hinshaw arrived at the same conclusion in his study of a small Guatemalan town.[2] The Nealtican study demonstrates that Protestant membership also results in increased prosperity in some peasant villages. Further studies are needed to determine whether these findings are part of a universal Latin American pattern of greater wealth in the Protestant sector or whether they are isolated occurrences.

Owing primarily to their greater wealth, which permits them to afford the risk of innovation, and secondarily to their greater trust in outsiders, to their greater ability to follow and implement instructions, and to their proclivity to join cooperatives, Protestants in Nealtican are more receptive than Catholics to agricultural innovation. An important question remaining to be answered by further studies in other communities is whether Protestants are more innovative if (a) they are equal to Catholics in wealth, or (b) if they are poorer than their Catholic counterparts. Based on the Nealtican study, the author would predict that, in cases of equal wealth, Protestants, owing to the secondary factors listed above, will be more receptive to agricultural innovation, while in cases of greater Catholic wealth, results will vary according to the magnitude of the wealth difference and to the relative size of the Protestant minority.

Conclusions

This study sheds light on several theories discussed previously. Weber hypothesized that in countries of mixed Catholic-Protestant composition, the higher technical and commercially trained personnel will be overwhelmingly Protestant. In Nealtican, a Latin American peasant village which has had a native Protestant community for almost half a century, Protestants dominate the incipient commercial and technical sector.

The concept of a correlation between religious affiliation and economic status, widely confirmed by sociological studies, is upheld in a peasant setting by the Nealtican evidence, where Protestants are significantly wealthier than Catholics.

Based on this study, it is hypothesized that in peasant societies, religious innovation is proportionate, all else being equal, to the extent of cultural diversity within the community, which is regulated by the degree of exposure to nontraditional influences.

This study supports Willems' theory of a correlation between the occurrence of Protestantism in Latin America and social change. In Nealtican peasant society, it was found that the youthful and ambitious are those most associated with social change.

The belief that native peoples convert to new religions in order to improve their economic position is not supported by the Nealtican evidence. On the contrary, in Nealtican, which is one of numerous Latin American communities in which Catholicism has long been declining in vigor, Protestantism is considerably more expensive and demanding in terms of time and conformation to behavioral restrictions than is Catholicism. It is considerably easier and cheaper to remain a nonparticipating Catholic than to convert to Protestantism.

The Foster and Erasmus theories that peasant society is inherently noninnovative are not supported by the Nealtican evidence. Technological innovation in Nealtican is restricted by a lack of sufficient financial security to justify the risk, by a distrust of outsiders and their products, and by an inability adequately to follow and to implement instructions.

Protestantism in Nealtican is a factor in overcoming the impediments to innovation and, consequently, Protestants are more receptive than Catholics to technological innovation.

The experience of Nealtican demonstrates that peasants will adopt only innovations which are perceived as truly economically beneficial and compatible.

A prerequisite to the introduction of beneficial agricultural innovations into Nealtican is a thorough knowledge of the local conditions under which agriculture operates, including the annual moisture cycle, seed and plant characteristics, tool needs, natural enemies, and the social and cultural milieu.

In spite of the overwhelming numerical majority of Catholics in Nealtican, the village is at present greatly influenced in many of its facets by the Protestant worldview.

In closing, the author wishes to stress the fact that the findings of this study should not be interpreted as implying that Catholic peasants should convert to Protestantism in order to become more receptive to agricultural innovation. This study does not advocate the belief in or practice of any value system. It is an acknowledged fact, however, that Protestants now constitute a significant minority sector in many Latin American nations, including Mexico, and if current trends continue, will comprise an ever-increasing proportion of the population of the region.

The indigenous Protestant minorities of numerous rural Latin American communities constitute a largely untapped source of potential increased agricultural productivity. Planners of Latin American development should be aware of these factors and establish strategies accordingly.

Notes

[1] Willems, pp. 180, 186, 206.

[2] Hinshaw, p. 41.

APPENDIX I

RATIO OF CATHOLIC PRIESTS TO MEMBERS BY COUNTRY

Country	Number of Members per Priest
Argentina	4,064
Bolivia	5,958
Brazil	7,766
Chile	3,114
Colombia	3,679
Costa Rica	4,983
Cuba	9,310
Dominican Republic	12,252
Ecuador	3,400
El Salvador	8,067
Guatemala	11,100
Haiti	7,570
Honduras	15,899
Mexico	5,373
Nicaragua	7,773
Panama	7,482
Paraguay	4,150
Peru	7,257
Puerto Rico	5,902
Uruguay	4,109
Venezuela	5,371

Source: Landsberger, p. 47.

APPENDIX II

GROWTH OF PROTESTANTISM IN LATIN AMERICA 1916-1961

Country	1916	1938	1952	1961
Argentina	6,850	38,293	251,656	414,323
Bolivia	247	4,173	16,805	46,663
Brazil	50,297	241,128	1,600,958	4,071,643
Chile	6,293	99,460	370,016	834,839
Colombia	384	2,981	27,386	92,728
Costa Rica	18,564	1,663	8,475	22,902
El Salvador		2,823	20,189	57,691
Nicaragua		16,515	29,179	37,666
Guatemala		21,740	75,845	149,081
Honduras		2,026	27,758	34,488
Panama		17,306	52,146	41,778
Cuba	25,031	36,184	100,582	264,927
Haiti	12,044	29,005	193,078	327,140
Dominican Republic		14,934	27,146	43,765
Ecuador	59	546	3,777	11,499
Paraguay	321	350	9,264	36,560
Peru	1,962	12,212	69,930	94,053
Mexico	30,942	55,652	334,756	897,227
Uruguay	1,311	1,913	15,666	42,594
Venezuela	144	4,534	13,775	26,042
TOTAL	170,527	632,563	3,380,281	7,710,412
Percent of Population	----	.49	2.04	3.84

Source: Damboriena, Vol. II, p. 16.

APPENDIX III

PERCENT PROTESTANT BY COUNTRY

Country	1938	1952	1961
Chile	1.98	5.87	11.80
Haiti	1.05	3.23	9.18
Puerto Rico	1.54	6.14	7.40
Brazil	.58	2.93	6.06
Panama	2.79	6.20	4.01
Guatemala	.98	2.54	3.93
Cuba	.79	1.75	3.89
Mexico	.28	1.22	2.62
Nicaragua	2.00	2.58	2.58
El Salvador	.17	1.01	2.25
Paraguay	.03	.95	2.11
Argentina	.27	1.39	1.94
Honduras	.90	1.83	1.78
Dominican Republic	.89	1.21	1.61
Uruguay	.08	.62	1.50
Bolivia	.15	.54	1.35
Costa Rica	.26	.99	.98
Peru	.17	.78	.89
Colombia	.03	.23	.64
Venezuela	.12	.26	.38
Ecuador	.02	.11	.27
LATIN AMERICA	.49	2.04	3.84

Source: Damboriena, Vol. II, p. 25.

APPENDIX IV

QUESTIONS ASKED OF ALL RESPONDENTS

1. Name, address, age, sex, employment or occupation.

   Do you hold your land as part of an ejido or as private property?

2. What precentage of your land is used for crops?

   What percentage of your land is used as pasture?

   What percentage of your land is in trees?

   What percentage of your land is unused?

3. What will be your net profit this year?

4. Which tools do you use in your farming, including the planting, the cultivation, and the harvest?

   Name the mechanized tools you use.

   How long have you used these tools?

   How did you first come to use each tool?

   Did you buy the tools on credit? If so, for what time period was the loan?

5. On what percentage of your crops do you use insecticides?

   How did you first become acquainted with insecticides?

6. On what percentage of your crops do you use pesticides?

   How did you first become acquainted with pesticides?

7. What percentage of your crop do you sell to others?

   What percentage of your crop do you and your family consume? (Specify each crop including beans and corn.)

8. How do you transport your harvests to the market or to the buyer? (a) on foot (b) by animal (c) by bus (d) other--describe.

APPENDIX IV, continued

9. Do you use hybrid seed? With which crops? What percentage of your seed is hybrid? (Specify each crop.)

10. Do you belong to a cooperative? What assistance have you received from it? What assistance have you given others through the cooperative?

11. Have you received credit for your crops in years past? Did you receive credit this year? What percentage of your expenses did you finance by credit? For how long was the loan period? At what interest rate? From where did you receive the credit?

12. How much land do you work?

    How did you obtain your land?

    How many parcels is your land divided into?

13. A. How long have you resided at this residence?

    How long have you resided in Nealtican?

    How many times have you moved in the past five years? In the past ten years? During your entire lifetime?

    B. How many siblings do you have? How many of your siblings were born in Nealtican? How many still reside in Nealtican?

14. A. What foods constitute your normal diet: (a) milk (b) meat (c) eggs?

    B. Do you buy canned food? If so, what percentage of your food is canned?

15. A. Where do you obtain your food: (a) supermarket (b) marketplace (c) your own harvests (d) other source (specify)?

    B. Do you or your wife make regular shopping trips to (a) Puebla (b) Atlisco (c) Cholula?

    Where do you make most of your shopping trips?

16. How many school grades did you complete?

    Do you know how to read now?

    Do you know how to write now?

APPENDIX IV, continued

17. A. How often do you leave Nealtican: (a) daily (b) weekly (c) monthly (d) yearly (e) never?

When you leave Nealtican, what is your most common destination?

What mode of transportation do you most frequently utilize when you leave Nealtican?

B. Do you read (a) books (b) newspapers (c) magazines (d) the Bible?

How often do you read: (a) daily (b) weekly (c) monthly (d) less than monthly?

C. Do you have a radio? If you do, how often do you listen to it: (a) daily (b) weekly (c) monthly (d) less than monthly?

D. Do you have a television set? If you do, do you watch it: (a) daily (b) weekly (c) monthly (d) less than once a month?

18. Have you received economic or technical assistance from your church? If so, how much and of what type?

19. Do you belong to the Plan Puebla?

20. Which modern appliances do you own: (a) stove (b) sewing machine (c) television (d) radio?

APPENDIX V

QUESTIONS ASKED OF PROTESTANT RESPONDENTS

1. A. Name, address, age, sex.

   B. Which large cities have you visited?

   Name the large cities in which you have lived.

   C. What is your occupation?

   D. If you are a farmer, how much land do you work?

   Do you hold your land as part of an ejido or as private property?

2. How were you converted to your religion: (a) through North American missionaries (b) through friends (c) born of member parents (d) other (specify)?

3. How long did you investigate your religion before you became converted?

4. How long have you been a member of your religion?

5. Do you consider yourself as (a) not active (b) active (c) very active, in your religion?

6. Have you received economic or technical aid from your church? If so, how much and of what type?

7. How much time do you contribute to your church each week?

8. How much money or material possessions do you contribute to your church?

9. Do you look upon your church contributions as a sacrifice?

10. Have you participated in the Huerto Familiar program?

11. If you have children in grade school, where do they attend?

12. Have you received instruction related to agricultural technology from your church?

BIBLIOGRAPHY

Abler, Ronald, John S. Adams, and Peter Gould. *Spatial Organization.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971.

Acheson, James M. "Limited Good or Limited Goods? Response to Economic Opportunity in a Tarascan Pueblo." *American Anthropologist,* Vol. 74, No. 5 (October, 1972), pp. 1152-1169.

Apodaca, Anacleto. "Corn and Custom: The Introduction of Hybrid Corn to Spanish American Farmers in New Mexico." *Human Problems in Technological Change,* ed. Edward H. Spicer. New York: Russell Sage Foundation, 1952.

"Area Conference in Southern South America." *The Ensign of the Church of Jesus Christ of Latter-day Saints,* Vol. 5, No. 2 (February, 1975), pp. 18-32.

Arensberg, Conrad M., and Arthur H. Niehoff. *Introducing Social Change.* Chicago: Aldine Publishing Company, 1964.

Auge, Claude, y Paul Auge. *Nuevo Pequeño Larousse Ilustrado.* Paris: Librería Larousse, 1959.

Banfield, Edward C. *The Moral Basis of a Backward Society.* New York: The Free Press, 1958.

Barnett, Homer G. "Diffusion Rates." *Process and Pattern in Culture,* ed. Robert A. Manners. Chicago: Aldine Publishing Company, 1964.

__________. *Innovation: The Basis of Culture Change.* New York: McGraw-Hill Book Company, Inc., 1953.

Bautista, Margarito. La Evolución de México. *Sus Verdaderos Progenitores y su Origen. El Destino de América y Europa.* México, D. F.: Apolonio B. Arzate Hermanos, 1935.

Bridges, Julian Curtis. *A Study of the Number, Distribution, and Growth of the Protestant Population in Mexico.* M. A. Thesis, Department of Sociology, University of Florida, 1969.

Broek, Jan O. M. *Compass of Geography.* Columbus, Ohio: Charles E. Merrill Books, Inc., 1966.

Carrion, Antonio. *Historia de la Ciudad de Puebla de los Angeles.* 2 tomos. Puebla, Puebla: Editorial José M. Cajica Jr., S. A., 1970.

Carter, William E. "Innovation and Marginality: Two South American Case Studies." *América Indígena*, Vol. XXV, No. 4 (Octubre, 1965), pp. 383-392.

Clawson, David L. *A Geographical Analysis of the Strength of Catholicism in Two Mexican Cities*. M. A. Thesis, Department of Geography, University of Florida, 1973.

Coe, Rodney M., and Elizabeth A. Barnhill. "Social Dimensions of Failure in Innovation." *Human Organization*, Vol. 26, No. 3 (Fall, 1967), pp. 149-156.

Cohen, Yehoshua S. *Diffusion of an Innovation in an Urban System*. The University of Chicago Department of Geography Research Paper No. 140. Chicago: The University of Chicago Printing Department, 1972.

Coleman, William J. *Latin American Catholicism: A Self-Evaluation*. Maryknoll, New York: Maryknoll Publications, 1958.

Considine, John M. *New Horizons in Latin America*. New York: Dodd, Mead, & Company, 1958.

Coughenour, C. Milton. "The Rate of Technological Diffusion Among Locality Groups." *The American Journal of Sociology*, Vol. 69, No. 4 (January, 1964), pp. 325-339.

Coxill, H. Wakelin, and Kenneth Grubb, eds. *World Christian Handbook 1968*. Nashville: Abingdon Press, 1967.

Crist, Raymond E., and Charles M. Nissly. *East from the Andes*. Gainesville: University of Florida Press, 1973.

Crumrine, N. Ross, and Lynne S. Crumrine. "Where Mayos Meet Mestizos: A Model for the Social Structure of Culture Contact." *Human Organization*, Vol. 28, No. 1 (Spring, 1969), pp. 50-57.

Cuevas, Mariano. *Historia de la Iglesia en México*. Quinta Edición. 2 tomos. México, D. F.: Editorial Patria, S. A., 1946.

Damboriena, Prudencio. *El Protestantismo en América Latina*. 2 tomos. Friburgo, Suiza: Oficina Internacional de Investigaciones Sociales de FERES, 1962-1963.

de Vise, Pierre. *Misused and Misplaced Hospitals and Doctors: A Locational Analysis of the Urban Health Care Crisis*. Washington, D. C.: Association of American Geographers Resource Paper No. 22, 1973.

Erasmus, Charles J. *Man Takes Control*. Minneapolis: University of Minnesota Press, 1961.

Flake, Gerry R. "Mormons in Mexico: The First 96 Years." *The Ensign of the Church of Jesus Christ of Latter-day Saints*, Vol. 2, No. 9 (September, 1972), pp. 20-21.

Fliegel, Frederick C., and Joseph E. Kivlin. "Attributes of Innovations as Factors in Diffusion." *The American Journal of Sociology*, Vol. 72, No. 3 (November, 1966), pp. 235-248.

Foster, George M. *Applied Anthropology*. Boston: Little, Brown and Company, 1969.

__________. *Culture and Conquest: America's Spanish Heritage*. Chicago: Quadrangle Books, 1960.

__________. "Peasant Society and the Image of Limited Good." *American Anthropologist*, Vol. 67, No. 2 (April, 1965), pp. 293-315.

__________. *Traditional Societies and Technological Change*. 2nd ed. New York: Harper & Row, Publishers, 1973.

__________. *Tzintzuntzán*. Boston: Little, Brown and Company, 1967.

Fried, Morton H. "Land Tenure, Geography and Ecology in the Contact of Cultures." *The American Journal of Economics and Sociology*, Vol. 11, No. 4 (July, 1952), pp. 391-412.

Friggens, Paul. "The Corn That Could Change the Lives of Millions." *American Agriculturist and the Rural New Yorker*, Vol. 171, No. 12 (December, 1974), pp. 10-11.

Ganzin, Marcel. "With Food and Justice for All." *The UNESCO Courier*, Vol. 28, No. 5 (May, 1975), pp. 4-6, 8-11, 36-37.

Gibson, Charles. *Tlaxcala in the Sixteenth Century*, Stanford, California: Stanford University Press, 1967.

González Dávila, Gil. *Teatro Eclesiástico de la Primitiva Iglesia de la Nueva España en las Indias Occidentales*. 2 tomos. Madrid: Jose Porrua Turanzas, Editor, 1959.

Goodenough, Ward Hunt. *Cooperation in Change*. New York: Russell Sage Foundation, 1963.

Griliches, Zvi. "Hybrid Corn: An Exploration in the Economics of Technological Change." *Econometrica*, Vol. 25, No. 4 (October, 1957), pp. 501-522.

Havens, A. Eugene. "Theory and Method of Research on Diffusion." *Rural Development in Tropical America*, eds. Kenneth L. Turk and Loy V. Crowder. Buffalo, New York: Harry Hoffman & Sons Printing, 1967.

Herskovits, Melville J. *Acculturation: The Study of Culture Contact*. Gloucester, Massachusetts: Peter Smith, 1958.

Hinshaw, Robert E. Panajachel: A Guatemalan Town in Thirty-year Perspective. Pittsburgh: University of Pittsburgh Press, 1975.

Hogbin, H. Ian. Social Change. London: A. C. Watts & Co., Ltd., 1958.

Houtart, Francois, and Emile Pin. The Church and the Latin American Revolution, trans. Gilbert Barth. New York: Sheed and Ward, 1965.

Huizer, Gerrit. "'Resistance to Change' and Radical Peasant Mobilization: Foster and Erasmus Reconsidered." Human Organization, Vol. 29, No. 4 (Winter, 1970), pp. 303-313.

Hurh, Won Moo. "Imitation: Its Limitations in the Process of Inter-Societal Culture Diffusion." International Journal of Comparative Sociology, Vol. X, Nos. 3-4 (September and December, 1969), pp. 263-285.

Ingham, John M. "On Mexican Folk Medicine." American Anthropologist, Vol. 72, No. 1 (February, 1970), pp. 76-87.

Jackson, Elton F., William A. Fox, and Harry J. Crockett, Jr. "Religion and Occupational Achievement." American Sociological Review, Vol. 35, No. 1 (February, 1970), pp. 48-63.

James, Preston E. Latin America. 4th ed. New York: The Odyssey Press, 1969.

Jones, Wellington D. "Procedures in Investigating Human Occupance of a Region." Annals of the Association of American Geographers, Vol. 24, No. 1 (March, 1934), pp. 93-111.

Katz, Elihu, and Martin L. Levin. "Traditions of Research on the Diffusion of Innovation." American Sociological Review, Vol. 28, No. 2 (April, 1963), pp. 237-252.

Kenyon, John, ed. Latin American Evangelist, Vol. 49, No. 5 (November-December, 1969), pp. 12, 21.

Kniffen, Fred. "Folk Housing: Key to Diffusion." Annals of the Association of American Geographers, Vol. 55, No. 4 (December, 1965), pp. 549-577.

Kroeber, A. L. Anthropology. New York: Harcourt, Brace and Company, 1948.

Landsberger, Henry A., ed. The Church and Social Change in Latin America. Notre Dame: University of Notre Dame Press, 1970.

Lasswell, Harold D. "The Transferability of Vicos Strategy." Peasants, Power, and Applied Social Change: Vicos as a Model, eds. Henry F. Dobyns, Paul L. Doughty, and Harold D. Lasswell. Beverly Hills, California: Sage Publications, 1964.

Lewis, Oscar. Life in a Mexican Village: Tepoztlán Restudied. Urbana: University of Illinois Press, 1951.

__________. "Medicine and Politics in a Mexican Village." Health, Culture and Community, ed. Benjamin D. Paul. New York: Russell Sage Foundation, 1955.

__________. "Seventh Day Adventism in a Mexican Village: A Study in Motivation and Culture Change." Process and Pattern in Culture, ed. Robert A. Manners. Chicago: Aldine Publishing Company, 1964.

Linton, Ralph. The Study of Man. New York: Appleton-Century-Crofts, Inc., 1936.

Lunsford, R. L., and Esther Lunsford. Tomorrow in Latin America. Kansas City, Missouri: Nazarene Publishing House, 1945.

Mayer, Albert J., and Harry Sharp. "Religious Preference and Worldly Success." American Sociological Review, Vol. 27, No. 2 (April, 1962), pp. 218-227.

McGavran, Donald. Church Growth in Mexico. Grand Rapids, Michigan: William B. Eerdsmans Publishing Company, 1963.

Mead, Margaret, ed. Cultural Patterns and Technological Change. New York: Mentor Books, 1955.

Mecham, J. Lloyd. Church and State in Latin America. Chapel Hill: The University of North Carolina Press, 1966.

Méndez D., Alfredo. "Social Structure and the Diffusion of Innovation." Human Organization, Vol. 27, No. 3 (Fall, 1968), pp. 241-249.

México, Dirección General de Estadística. Noveno Censo General de Población 1970. México, D. F.: Secretaría de Industria y Comercio, 1971.

__________. Octavo Censo General de Población 1960. México, D. F.: Secretaría de Industria y Comercio, 1963.

__________. Séptimo Censo General de Población 1950. México, D. F.: Secretaría de Economía, 1953.

__________. Sexto Censo General de Población 1940. México, D. F.: Secretaría de la Economía Nacional, 1943.

Millikan, Max F., and David Hapgood. No Easy Harvest: The Dilemma of Agriculture in Underdeveloped Countries. Boston: Little, Brown and Company, 1967.

Monti, Daniel P. Presencia del Protestantismo en el Río de la Plata durante el Siglo XIX. Buenos Aires: Editorial La Aurora, 1969.

Niehoff, Arthur H., and J. Charnell Anderson. "Peasant Fatalism and Socio-economic Innovation." *Human Organization*, Vol. 25, No. 4 (Winter, 1966), pp. 273-283.

Parkes, Henry Bamford. *A History of Mexico*. Boston: Houghton Mifflin Company, 1970.

Press, Irwin. "Ambiguity and Innovation: Implications for the Genesis of the Cultural Broker." *American Anthropologist*, Vol. 71, No. 2 (April, 1969), pp. 205-217.

Read, William R., and Frank I. Ineson. *Brazil 1980: The Protestant Handbook*. Monrovia, California: Missions Advanced Research and Communications Center, 1973.

Redfield, Robert. *A Village That Chose Progress: Chan Kom Revisited*. Chicago: University of Chicago Press, 1950.

__________. *The Primitive World and Its Transformations.* Ithaca, New York: Cornell University Press, 1957.

Ricard, Robert. *La Conquista Espiritual de México*, trans. Angel María Garibay K. México, D. F.: Editorial Jus y Editorial Polis, 1947.

Rogers, Everett M. *Diffusion of Innovations*. New York: The Free Press of Glencoe, 1962.

Rycroft, W. Stanley, and Myrtle M. Clemmer. *A Factual Study of Latin America*. New York: United Presbyterian Church in the U. S. A., 1963.

Sauer, Carl O. *Agricultural Origins and Dispersals*. New York: American Geographical Society, 1952.

__________. "The Survey Method in Geography and Its Objectives." *Annals of the Association of American Geographers*, Vol. 14, No. 1 (March, 1924), pp. 17-33.

Seele, E. "Restos de Milpas y Poblaciones Prehispánicas Cerca de San Buenaventura Nealtican, Puebla." *Comunicaciones*, Vol. 7 (1973), pp. 77-86.

Siegel, Bernard J. *Acculturation: Critical Abstracts, North America*. Stanford, California: Stanford University Press, 1955.

Stanislawski, Dan. "The Origin and Spread of the Grid-Pattern Town." *The Geographical Review*, Vol. 36, No. 1 (January, 1946), pp. 105-120.

Tamayo, Jorge L. *Geografía General de México*. 2a Edición. 4 tomos. México, D. F.: Instituto Mexicano de Investigaciones Económicas, 1962.

United Nations Department of Economic and Social Affairs. Demographic Yearbook 1972. New York: Statistical Office, 1973.

United Nations Department of Economic and Social Affairs. Statistical Yearbook 1972. New York: Statistical Office, 1973.

Vásquez, Mario C. "The Interplay Between Power and Wealth." Peasants, Power, and Applied Social Change: Vicos as a Model, eds. Henry F. Dobyns, Paul L. Doughty, and Harold D. Lasswell. Beverly Hills, California: Sage Publications, 1964.

Vergara, Ignacio. El Protestantismo en Chile. Santiago, Chile: Editorial del Pacífico, S. A., 1962.

Veroff, Joseph, Sheila Feld, and Gerald Gurin. "Achievement Motivation and Religious Background." American Sociological Review, Vol. 27, No. 2 (April, 1962), pp. 205-217.

Wagley, Charles, and Marvin Harris. "A Typology of Latin American Subcultures." American Anthropologist, Vol. 57, No. 3 (June, 1955), pp. 428-451.

Wallace, Anthony F. C. Culture and Personality. New York: Random House, 1961.

Weber, Max. The Protestant Ethic and the Spirit of Catholicism, trans. Talcott Parsons. New York: Charles Scribner's Sons, 1958.

Webster's Seventh New Collegiate Dictionary. Springfield, Massachusetts: G. & C. Merriam Company, 1963.

Whetten, Nathan. Rural Mexico. Chicago: The University of Chicago Press, 1948.

Willems, Emilio. Followers of the New Faith. Nashville, Tennessee: Vanderbilt University Press, 1967.

Wolf, Eric R. "Types of Latin American Peasantry: A Preliminary Discussion." American Anthropologist, Vol. 57, No. 3 (June, 1955), pp. 452-471.

Yarza de De La Torre, Esperanza. Volcanes de México. México, D. F.: M. Aguilar, Editor, S. A., 1971.

BIOGRAPHICAL SKETCH

David Leslie Clawson was born on May 17, 1948, in Douglas, Arizona. At the age of twelve, he moved with his family from Tucson, to Snowflake, Arizona, where he graduated from high school in May, 1966.

The following fall he entered Brigham Young University and attended for one year. From 1967 to 1969, he served as a missionary in Mexico for the Church of Jesus Christ of Latter-day Saints. In March, 1970, he enrolled in the University of Utah, graduating from that institution magna cum laude in August, 1972.

In September, 1972, he enrolled in the University of Florida, where he held graduate teaching assistantships with both the Department of Geography and the Reading and Study Skills Center until August, 1974. In December, 1973, he was awarded the Master of Arts degree and a Certificate in Latin American Studies.

In September, 1974, he and his family moved to Cholula, Mexico, where they resided for nine months while the field research for this study was carried out under a Fulbright-Hays Doctoral Dissertation Research Abroad fellowship. In September, 1975, they returned to Gainesville to accept a graduate teaching assistantship in the Department of Physical Sciences.

The author is married to Margaret Ray, and the couple has three children, Elizabeth, Ernest Leslie, and Emma. He is a member of the Association of American Geographers, the Southeastern Division of the Association of American Geographers, the Conference of Latin Americanist Geographers, Phi Beta Kappa, and Phi Kappa Phi.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Raymond E. Crist
Raymond E. Crist, Chairman
Research Professor Emeritus of
Geography

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

William E. Carter
William E. Carter
Professor of Anthropology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Clark I. Cross
Clark I. Cross
Associate Professor of Geography

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Louis A. Paganini
Louis A. Paganini
Assistant Professor of Geography

This dissertation was submitted to the Graduate Faculty of the Department of Geography in the College of Arts and Sciences and to the Graduate Council and was accepted as partial fulfillment of the requirements of the degree of Doctor of Philosophy.

June, 1976

Dean, Graduate School